INDEX OF AUTHORS' NAMES.

ABSTRACTS. 1905. Parts I. & II.

(Marked A., i and A., ii respectively); and Transactions, 1905 (marked T.); and Proceedings, 1905 (marked P.).

COMPILED BY MARGARET D. DOUGAL.

A.

Abbati, *Gino*, and *Luigi de* **Bernardinis**, hydrophthalic acids: two new hydrophthalic anhydrides. I., A., i, 599.

Abderhalden, *Emil*, proteid chemistry, A., i, 496.

proteolysis and proteid synthesis in the animal organism, A., ii, 334.

the importance of the digestion of proteids for their assimilation, A., ii, 334.

Abderhalden, *Emil*, and *James Bryan* **Herrick**, composition of conglutin from lupin seeds, A., i, 846.

Abderhalden, *Emil*, and *Fritz* **Pregl**, a non-dialysable proteid-like constituent of human urine, A., ii, 843.

Abderhalden, *Emil*, and *Béla* **Reinbold**, monoamino-acids from the edestin of sunflower seeds, A., i, 620.

action of pancreatic juice of edestin from cotton seeds, A., ii, 838.

Abderhalden, *Emil*, and *Peter* **Rona**, the composition of the proteid of *Aspergillus niger*, A., i, 954.

the value of the cleavage products of casein in the animal organism, A., ii, 467.

behaviour of glycyl-*l*-tyrosine in the dog's organism after subcutaneous injection, A., ii, 839.

Abderhalden, *Emil*, and *Otto* **Rostoski**, monoamino-acids of edestin from cotton seeds and their behaviour with gastric juice, A., i, 619.

the Bence-Jones proteid, A., i, 954.

Abderhalden, *Emil*, and *Franz* **Samuely**, composition of gliadin from wheat, A., i, 620.

behaviour of cystine, dialanylcystine, and dileucylcystine in the organism of the dog, A., ii, 839.

Abderhalden, *Emil*, and *Franz* **Samuely**, assimilation of proteid in animals, A., ii, 840.

Abderhalden, *Emil*, and *Alfred* **Schittenhelm**, excretion of leucine and tyrosine in a case of cystinuria, A., ii, 741.

Abderhalden, *Emil*, and *Yutaka* **Teruuchi**, composition of proteid from pine seeds, A., i, 846.

Abderhalden, *Emil*. See also *Emil* **Fischer**.

Abegg, *Richard* [*Wilhelm Heinrich*], theory of valency, A., ii, 155.

the eighth group of the periodic system, A., ii, 380.

periodic classification of the elements, A., ii, 514.

Abegg, *Richard*, and *Ferdinand Willy* **Hinrichsen**, conception of valency, A., ii, 155.

Abegg, *Richard*, and *H.* **Pick**, effect of silver nitrate on the solubility of silver nitrite, A., ii, 586.

Abegg, *Richard*, and *James Frederick* **Spencer**, thallium oxalates, A., i, 853.

Abegg, *Richard*. See also *James Frederick* **Spencer**.

Abel, (*Sir*) *Frederick Augustus*, obituary notice of, T., 564.

Aceña, *R. de la*, action of hydrogen bromide or hydrogen chloride on triacetin; new halogen derivatives of triacetin, A., i, 7.

Ackermann, *D.*, nuclei of birds' red corpuscles, A., ii, 98.

Ackermann, *Edwin*, refractometric analysis of beer, A., ii, 486.

Ackermann, *Edwin*, and *Albert* **Steinmann**, estimation of alcohol in beers by means of the Zeiss immersion refractometer, A., ii, 557.

Acland, *Theodore Dyke*, hours of sleep in public schools, A., ii, 541.

Acree, *Salomon Farby*, acetyl derivatives of phenylurazole, A., i, 160.
pinacone-pinacolin rearrangement, A., i, 216.
Adametz, *Leopold*, and *T.* **Chszaszez**, formation of volatile alkaloids in sterilised milk by *Bacillus nobilis*; occurrence of such compounds in Emmenthaler cheese, A., ii, 273.
Adamoff, *Wera*, physiology of glycogen, A., ii, 181.
Adams, *E. P.*, absence of helium from carnotite, A., ii, 329.
Adams, *G. E.* See *Homer Jay* **Wheeler**.
Adams, *Paul*, light petroleum, vaselin oil, and vaselin, A., i, 253.
Adeney, *Walter Ernest*, chemical changes attending the aërobic bacterial fermentation of simple organic substances. I. Carbamide, asparagine, albumose, and Rochelle salt, A., ii, 340.
photographs of spark spectra. III. Ultra violet spark spectra of platinum and chromium, A., ii, 493.
Adler, *J.* See *Alexandre* **Desgrez**.
Adler, *Oskar*, and *Rudolf* **Adler**, precipitability of carbohydrates in urine by lead acetate, A., ii, 843.
Adler, *Rudolf*, and *Oskar* **Adler**, precipitation of lævulose from urine by lead acetate, A., ii, 337.
reactions of carbohydrates, A., ii, 360.
Adler, *Rudolf*. See also *Oskar* **Adler**.
Administration der Minen von Buchsweiler, preparation of sodium ferrocyanide from calcium ferrocyanide, A., i, 123.
Aeuer, *E.* See *Paul* **Köthner**.
Agamennone, *Giovanni*. See *Federico* **Giolitti**.
Ageewa, *M.*, reversible isomeric process taking place between γ-phenylpropylene and *s*-phenylmethylethylene [α-phenylpropylene] on heating with anhydrous alkali hydroxides, A., i, 776.
Aggazzotti, *Alberto*, action of oxygen on the sickness produced by rarefaction of the air; experiments on an orang-outang, A., ii, 835.
simultaneous action of oxygen and carbon dioxide on the sickness produced by rarefaction of the air; experiments on an orang-outang, A., ii, 835.
experiments on a man breathing carbon dioxide and oxygen together under a barometric pressure of 122 mm., corresponding with an altitude of 14,582 metres, A., ii, 835.
Ahlers, *Wilhelm*, acetylhydrocotarnine-acetic acid, A., i, 785.
Ahrens, *Felix Benjamin*, 4-methylpyridine, A., i, 232.
hydroxysparteine, A., i, 917.
Ahrens, *Felix Benjamin*, and *Adolf* **Stapler**, Grignard's reaction with dihaloids, A., i, 423, 868.
Ahrle, *Hermann*. See *Adalbert* **Kolb**.
Aichel, *O.* See *L.* **Weiss**.
Aktien-Gesellschaft für Anilin-Fabrikation, glycollic acid derivatives of pyrogallol and its alkyl ethers, A., i, 135.
dyes of the cyanine series, A., i, 149.
preparation of bromolecithin, A., i, 163.
preparation of indophenols, A., i, 468.
naphthaphenazines, A., i, 552.
nitration of aromatic arylsulphonamides, A., i, 639.
preparation of 1-phenyl- and -*p*-tolylnaphthylamine-8-sulphonic acid, A., i, 717.
preparation of α-phenyl- and -*p*-tolylnaphthylamine-6- and -7-sulphonic acids, A., i, 770.
phenyl ether-*o*-carboxylic [aryloxybenzoic] acids, A., i, 780.
yellow sulphur dye, A., i, 913.
indophenols containing the sulphamino-group, A., i, 934.
Alagna, *Ezio*. See *Efisio* **Mameli**.
Alber, *E.*, 7-aminoquinaldine [7-amino-2-methylquinoline], A., i, 235.
Alberda van Ekenstein, *William*, and *Jan Johannes* **Blanksma**, hydrazones derived from *o*-, *m*-, and *p*-nitrophenylhydrazines, A., i, 474.
Albert, *Fricdrich*. See *Emil* **Knoevenagel**.
Albert, *Kurt*. See *Otto* **Ruff**.
Albert, *Robert*. See *Philipp* **Malkomesius**.
Alcock, *Nathaniel Henry*. See *Otto* **Loewi**.
Aldrich, *Thomas Bailey*, adrenaline [epinephrine], the active principle of the suprarenal glands, A., i, 955.
Alexander, *A. D.* See *Leonard* **Bairstow**.
Alexander, *Paul*, caoutchouc nitrosite and its use for the analysis of crude caoutchoucs and caoutchouc products. I., A., i, 223.
inversion of ψ-ionone and its derivatives, A., i, 355.
Alexander, *Theodor*, condensation of aminoacetone with benzaldehyde, A., i, 92.
Alexandroff, *D.*, detection of pyrrolidine-2-carboxylic acid, A., ii, 869.

Alexéeff, *D. W.*, dimethylmethylene-trimethylene, $\begin{matrix}CH_2\\|\\CH_2\end{matrix}\!\!>\!C{:}CMe_2$, A., i, 639.

Alix, *Just.* See *Isidore* **Bay.**

Allain Lecanu, [*Jacques François Louis*] *Jules*, action of phenylhydrazine on alkyl bromides and iodides, A., i, 375.

Allen, *H. S.* See (*Lord*) **Blythswood.**

Allen, *Richard W.* See *Marcus Seymour* **Pembrey.**

Allihn, *Felix*, Bunsen burner with sieve attachment, A., ii, 81.

Almagia, *Marco*, and *Gustav* **Embden**, excretion of sugar after administration of alanine in dogs without a pancreas, A., ii, 842.

Aloy, *Jules* [*François*], and *Aristide* **Frébault**, picric acid and 4:6-dinitro-2-aminophenol (picramic acid), A., i, 429.

Aloy, *Jules*, and *F.* **Laprade**, a reagent for phenols, A., ii, 616.

Aloy, *Jules*, and *Pierre Charles* **Rabaut**, reduction of nitro-derivatives with sodium hyposulphite, A., i, 517.

Alsberg, *Carl Luca*, and *Otto* **Folin**, metabolism in cystinuria, A., ii, 544.

Altan, *A.*, *Psidium Guajava* (djamboe) leaves, A., ii, 192.

Alvarez, *Eugenio Pinerua*, diphenylamine as reagent for nitrites, nitrates, chlorates, and its use when mixed with resorcinol and β-naphthol, A., ii, 352.

new reagent for potassium, A., ii, 355.

new general colour reagent of the polyphenols, their isomerides, and higher organic compounds, A., ii, 359.

new iodised compound of osmium, A., ii, 423.

reaction of rhodium, A., ii, 485.

colour reactions of pyruvic acid with α- and β-naphthols in sulphuric acid solution, A., ii, 487.

new reagent for aconitine, A., ii, 491.

Alway, *Frederick Jacob*, and *Walter D.* **Bonner**, transformation of azoxybenzaldehyde, A., i, 676.

Alway, *Frederick Jacob*, and *Ross A.* **Gortner**, two aromatic nitroso-compounds [*m*-dinitrosobenzene and *m*-nitronitrosobenzene], A., i, 516.

Amberg, *Richard*, theory of the deposition of metals from rapidly moving electrolytes, A., ii, 7.

chemical properties and combining weight of palladium, A., ii, 832.

Amberger, *Conrad.* See *Carl* **Paal.**

Amenomiya, *T.*, terpinene nitrosite, A., i, 603.

constitution of terpinene, A., i, 802.

Ammann, *Louis.* See *Léon* **Lindet.**

Amos, (*Miss*) *Cornelia Bonté Sheldon*, effects of ligature of one ureter, A., ii, 337.

Amosoff, *W.* See *Nic. M.* **Kijner.**

Ampola, *Gaspare*, denitrification of soil. III., A., ii, 194.

Ampola, *Gaspare*, and *Francesco* **Scurti**, tobacco oil; chemical and physical properties and composition, A., ii, 214.

Anderlini, *Francesco.* See *Raffaelo* **Nasini.**

Andersen, *A. C.* See *Sören Peter Lauritz* **Sörensen.**

Anderson, *Hugh Kerr*, action of drugs on the paralysed iris, A., ii, 546.

Anderson, *William Carrick*, the formation of magnesia from magnesium carbonate by heat, and the effect of temperature on the properties of the product, T., 257; P., 11.

André, *Gustave*, development of organic matter in seeds during maturation, A., ii, 50.

transformations of nitrogenous substances in seeds during maturation, A., ii, 604.

simultaneous variations of organic acids in some oleaginous plants, A., ii, 605.

Andreasch, *Rudolf*, and *Arthur* **Zipser**, substituted rhodanic acids, and their aldehyde condensation products. III., A., i, 930.

Andrew, *George William.* See *William Arthur* **Bone.**

Andrew, *I. A.* See *Harry Ward* **Foote.**

Andrews, *Albert Edward.* See *Wyndham Rowland* **Dunstan.**

Andrews, *Launcelot Winchester*, use of chromates of barium and of silver in the estimation of sulphates and chlorides, A., ii, 115.

Andrlík, *Karl*, estimation of the harmful nitrogen in the beet and in the products of sugar factories, A., ii, 616.

Andrlík, *Karl*, *Vladimír* **Staněk**, and *B.* **Mysík**, comparative experiments on the manuring of beet, A., ii, 550.

Andrlík, *Karl*, and *J.* **Urban**, influence of the [harmful] nitrogen on the purity of the syrup, A., ii, 617.

Angeli, *Angelo*, and *Francesco* **Angelico**, new reactions of nitroxyl (dihydroxyammonia), A. ii, 385.

Angeli, *Angelo*, and *Vincenzo* **Castellana**, a reaction of secondary amines, A., i, 491.

Angeli, *Angelo*, and *Giuseppe* **Maragliano**, nitration of amines, A., i, 873.

Angelico, *Francesco*, transformations of the nitrosopyrroles, A., i, 659.
amines and diazopyrroles, A., i, 938.

Angelico, *Francesco*. See also *Angelo* **Angeli**.

Angelo, *Antonino d'*. See *Vincenzo* **Castellana**.

Angelucci, *Ottorino*, constitution of the group, N_2O_2, of pernitroso-compounds derived from oximes, A., i, 801.
new laboratory apparatus, A., ii, 694.

Ankersmit, *J. S.* See *Fritz* **Ullmann**.

Annoni, *Angelo*, preparation of barium cacodylate, A., i, 758.

Anschütz, *Richard*, [acetyl-lactonitrile; acetylsalicylphenetidide]; correction, A., i, 267.

Anschütz, *Richard*, [and *Ferdinand* **Haas**], methyl itaconate, A., i, 259.

Antoni, *Wilhelm*. See *Eduard* **Buchner**.

Antonoff, *G. N.*, compounds of haloid salts of metals with hydroxylamine, A., ii, 709.

Antony, *Ubaldo*, and *Giuseppe* **Magri**, liquid hydrogen sulphide as a solvent, A., ii, 446.

Apitzsch, *Hermann*, action of carbon disulphide and potassium hydroxide on ketones. II., A., i, 810.

Arbenz, *Emil*. See *Emil* **Erlenmeyer**, *jun.*

Arbusof, *Alexander*, esters of phosphorous acid, A., i, 316.

Archbutt, *Leonard*, the action of slightly alkaline waters on iron, A., ii, 590.

Archibald, *Ebenezer Henry*. See *Howard Turner* **Barnes** and *Bertram Dillon* **Steele**.

Armes, *Henry Percy*. See *Julius Berend* **Cohen**.

Armstrong, *Edward Frankland*, and *Stephen Lewis* **Courtauld**, formation of isodynamic glucosides with reference to the theory of isomeric change and the selective action of enzymes; preparation of β-methylglucoside, A., i, 746.

Armstrong, *Henry Edward*, the mechanics of fire, A., ii, 448.

Armstrong, *Henry Edward*, and *William* **Robertson**, the significance of optical properties as connoting structure; camphorquinone—hydrazones—oximes—diazo-derivatives; a contribution to the theory of the origin of colour and to the chemistry of nitrogen, T., 1272; P., 180; discussion, P., 180

Arnaud, *Francis William Frederick*. See *Cecil Howard* **Cribb**.

Arnd, *Thankmar*. See *Heinrich* **Biltz**.

Arndt, *Kurt*, metallic calcium, A., ii, 87, 453.

Arnold, *Alfred*. See *Emil* **Erlenmeyer**, *jun.*

Arnold, *Carl*, behaviour of carbonates and hydroxides towards saturated solutions of potassium and ammonium carbonates, A., ii, 356.

Arnot, *Robert*. See *Emil* **Knoevenagel**.

Aron, *Hans*, influence of alkalis on the growth of bone, A., ii, 100.

Arrhenius, *Svante August*, and *Thorvald* **Madsen**, toxins and anti-toxins; diphtheria poison, A., ii, 50.

Arth, *Georges* [*Marie Florent*], estimation of "coke" and "volatile matter" in coal, A., ii, 202.

Artmann, *Paul*, introduction of iodine into tolylcarbamides, A., i, 878.

Artus. See *Jacques* **Cavalier**.

Arzberger, *H.*, new hydrogen sulphide, carbon dioxide, or hydrogen generating apparatus, A., ii, 21.

Ashbrook, *Donald S.*, electrolytic separations possible with a rotating anode, A., ii, 64.

Ashley, *R. Harman*, oxidation of sulphites by iodine in alkaline solution, A., ii, 351.
estimation of sulphites by iodine, A., ii, 609.

Asō, *Keijirō*, further observations on oxydases, A., ii, 346.

Asō, *Keijirō*. See also *Oscar* **Loew**.

Astre, *Charles*, and *G.* **Bécamel**, compound of pyramidone with mercuric chloride, A., i, 835.

Astre, *Charles*, and *Jules* **Ville**, compound of antipyrine with mercuric oxide, A., i, 670.

Astruc, *A.*, piperazine glycerophosphates, A., i, 382.
piperazine monomethylarsonate, A., i, 671.

Astruc, *A.*, and *J.* **Delorme**, mineral waters of Fumade, A., ii, 727.

Astruc, *A.*, and *Gaston* **Pégurier**, estimation of pyramidone, A., ii, 778.

Aten, *A. H. W.*, the system pyridine and methyl iodide, A., ii, 237.

Aten, *A. H. W.* See also *Hendrik Willem Bakhuis* **Roozeboom**.

Atkinson, *Ernest Francis Joseph*, and *Jocelyn Field* **Thorpe**, an intramolecular change leading to the formation of naphthalene derivatives, P., 305; discussion, P., 306.

Aubel, *Edmond* [*Marie Lambert*] *van*, decomposition of iodoform by the action of oxygen and light rays, A., i, 1.

Auchy, *George*, the sodium hydroxide method of estimating molybdenum in steel, A., ii, 861.
Auer, *John*. See *S. J.* **Meltzer**.
Auerbach, *Friedrich*, formaldehyde and formate formation, A., i, 740.
relation between the logarithmic temperature constant and heat evolution, A., ii, 571.
Auerbach, *Friedrich*, and *Hermann* **Barschall**, formaldehyde. I. Formaldehyde in aqueous solution, A., i, 859.
Auger, *Victor*, thioformic acid, A., i, 14.
acetyl-lactic [α-acetoxypropionic] acid, A., i, 320.
Auld, *S. M.*, and *Arthur* **Hantzsch**, compounds of ketones and aldehydes with mercuric oxide, A., i, 742.
supposed isomerism of tetramethylammonium iodide mercuricyanide, A., i, 747.
Austin, *L.* See *Ludwig* **Holborn**.
Austin, *Percy Corlett*. See *Alfred* **Senier**.
Autenrieth, *Wilhelm* [*Ludwig*], and *René* **Bernheim**, ethylsulphone derivatives of *p*-phenetidine and their pharmacological importance, A., i, 47.
Autenrieth, *Wilhelm*, [with *Carl* **Pretzell**], the five isomeric acids, $C_4H_6O_2$, A., i, 629.
Auwers, *Karl* [*Friedrich*], benzoyl derivatives of salicylamide, A., i, 894.
Auwers, *Karl*, [and, in part, *M.* **Hessenland**], conversion of hydro-aromatic alcohols into benzene derivatives, A., i, 434.
Auwers, *Karl*, and *Gustav* **Keil**, cyclic ketones from chloroform and phenols, A., i, 445.
Auwers, *Karl*, and *Th. von* **Markovits**, *vic-m*-xylenol and tetramethyldiphenoquinone, A., i, 219.
Auwers, *Karl*, and *E.* **Rietz**, condensation of ψ-phenols with phenols, A., i, 887.
Avery, *Samuel*, changes of colour caused by the action of certain rays on glass, A., ii, 589.
Axhausen, *Walter*. See *Emil* **Fischer**.
Ayrignac, *J.* See *Alexandre* **Desgrez**.
Azzarello, *E.*, action of diazomethane on ethylene and diallyl, A., i, 867.
action of hydroxylamine and α-benzylhydroxylamine on ethyl hydroxytrimethylcomenate, A., i, 916.
pyrazoline ketones, A., i, 941.

B.

Babb, *J. E.*, an improved gas apparatus, A., ii, 348.
Babel, *Alexander*, action of morphine and its derivatives, A., ii, 339.
Baborovský, *G.*, the behaviour of magnesium anodes, A., ii, 671.
Bach, *Alexis*, catalase, A., i, 623.
Backer, *H. J.*, action of pure [absolute] nitric acid on benzenesulphomethylamide, A., i, 766.
Bacon, *Raymond Foss*, reactions of sodium benzhydrol, A., i, 203.
Bacon, *Roger*, presentation to the Society, by Mr. Oscar Guttmann, of bronze medal struck in honour of, in 1818, P., 83.
Bacovescu, *A.*, and *Amé* **Pictet**, isostrychnine, A., i, 815.
Baczyński, *Wł.*, and *Stefan von* **Niementowski**, dihydroxyacridone and its derivatives, A., i, 927.
Bade, *Fritz*. See *Emil* **Erlenmeyer**, *jun.*
Badische Anilin- & Soda-Fabrik, [4-phenoxy-2-aminobenzenesulphonic acid], A., i, 127.
ω-sulphomethylanthranilic acid, A., i, 130.
[a new purpurinsulphonic acid], A., i, 146.
halogen derivatives of fluoran, A., i, 149.
[chloroindanthrene], A., i, 158.
[*o*-hydroxyazo-derivatives of α-naphthylamine], A., i, 250.
[azo-dyes from alphylsulphonaminonaphthol derivatives], A., i, 250.
[azo-dyes from nitro-*m*-diamines], A., i, 251.
ω-sulphomethyl derivatives of aromatic amines, A., i, 340, 769.
condensation product from anthranilic acid and formaldehyde, A., i, 437.
preparation of nitriles, A., i, 438.
preparation of ω-cyanomethylanthranilic acid, A., i, 645.
[a new aminodihydroxyanthraquinonesulphonic acid], A., i, 654.
preparation of stable, dry hyposulphites, A., ii, 814.
Baer, *Julius*, and *Adam* **Loeb**, liver autolysis, A., ii, 734.
Bärlocher, *M.* See *Joh.* **Howitz**.
Baeyer, [*Johann Friedrich Wilhelm*] *Adolf von*, dibenzylideneacetone and triphenylmethane. VII., A., i, 281.
Grignard's reaction, A., i, 766.
Baeyer, *Adolf von*, [in part with *Richard* **Hallensleben**], dibenzylideneacetone and triphenylmethane. VIII., A., i, 358.
Bahadur, *Rana*, influence of various ratios of phosphoric acid to nitrogen on the growth of barley, A., ii, 348.

Baikoff, *Alexander L.*, contact phenomena in the flame under the influence of solids, A., ii, 379.

Bailey, *E. Monroe.* See *A. L.* **Winton.**

Bainbridge, *Francis Arthur*, the lymph-flow from the pancreas, A., ii, 100.

Bainbridge, *Francis Arthur*, and *Henry Hallett* **Dale**, contractile mechanism of the gall-bladder, A., ii, 842.

Bairstow, *Leonard*, and *A. D.* **Alexander**, explosions of mixtures of coal gas and air in a closed vessel, A., ii, 815.

Baker, *Julian Levett*, and *William Douglas* **Dick**, detection and estimation of small quantities of maltose in the presence of dextrose, A., ii, 290.

Bakker, *Gerrit*, thickness and tension of the capillary layer, A., ii, 304.

Baldoni, *Alessandro*, biological importance of iron, A., ii, 46.

poisons applied to the outer surface of the mammalian heart, A., ii, 338.

Baleau, *Hermann.* See *Charles Edward* **Ham.**

Balke, *Clarence W.*, double fluorides of tantalum, A., ii, 719.

Balke, *Clarence W.* See also *Edgar Fahs* **Smith.**

Ball, *William Craven*, complex nitrites of bismuth, T., 761; P., 129; discussion, P., 130.

Bally, *Oscar*, syntheses in the anthracene series, and new dyes, A., i, 237.

Baly, *Edward Charles Cyril*, and *John Norman* **Collie**, the ultra-violet absorption spectra of aromatic compounds. Part I. Benzene and certain mono-substituted derivatives, T., 1332; P., 203.

Baly, *Edward Charles Cyril*, and *Cecil Henry* **Desch**, the ultra-violet absorption spectra of certain enol-keto-tautomerides. Part II., T., 766; P., 84; discussion, P., 85.

Baly, *Edward Charles Cyril*, and (*Miss*) *Elinor Katharine* **Ewbank**, the ultra-violet absorption spectra of aromatic compounds. Part II. The phenols, T. 1347; P., 203.

the ultra-violet absorption spectra of aromatic compounds. Part III. Disubstituted derivatives of benzene, T., 1355; P., 210.

Bamberg, *R.* See *Reinhold von* **Walther.**

Bamberger, *Max*, and *Anton* **Landsiedl**, chemistry of celery (*Apium graveolens*), A., ii, 52.

chemistry of the uccleroderms, A., ii, 852.

Bancels, *Larguier des*, influence of electrolytes on the mutual precipitation of colloids of opposite electrical sign, A., ii, 513.

pancreatic juice rendered active under the combined influence of colloids and electrolytes, A., ii, 643.

Bancroft, *Wilder Dwight*, indirect analyses in multi-component systems, A., ii, 685.

Bang, *Ivar*, preparation of taurocholic acid, A., i, 750.

precipitins, A., i, 956.

are proteolytic and rennetic ferments identical? A., ii, 100.

Barbier, *Henri.* See *Auguste* **Lumière.**

Barbier, *Philippe*, and *Georges* **Léser**, preparation of dimethylacrylic acid, A., i, 628.

conversion of cinnamaldehyde into cinnamyl alcohol, A., i, 653.

Barbier, *Philippe*, and *Paul* **Sisley**, unsymmetrical safranines, A., i, 840.

Barbieri, *Giuseppe*, alkalimetric estimation of iodine, A., ii, 350.

titration of nitrous acid with quadrivalent cerium, A., ii, 553.

Barbieri, *Giuseppe*, and *Filippo* **Calzolari**, cobaltic [fluoride], A., ii, 393.

Barbieri, *Giuseppe.* See also *Giuseppe* **Plancher.**

Barbieri, *N. Alberto*, protagon, A., i, 621.

Barboni, *I.* See *Angiolo* **Funaro.**

Barcroft, *Joseph*, modification of Bohr's gas receiver, A., ii, 551.

Barcroft, *Joseph*, and *Thomas Grigor* **Brodie**, gaseous metabolism of the kidney, A., ii, 99, 737.

Bardach, *Bruno*, simulation of traces of albumin by substances which interfere with the ferrocyanide test, especially in liquids requiring clarification, A., ii, 128.

Bardin, *Jean.* See *Alphonse* **Seyewetz.**

Barge, *Rudolf*, and *Léon* **Givaudan**, separation of toluene-*o*- and -*p*-sulphonamides, A., i, 124.

Bargellini, *Guido*, tolylnaphthalimides and naphthylnaphthalimides, A., i, 210.

Bargellini, *Guido.* See also *Franz* **Sachs.**

Barger, *George*, association in mixed solvents, T., 1042; P., 204.

Barger, *George*, and *Arthur James* **Ewins**, application of the microscopic method of molecular weight determination to solvents of high boiling point, T., 1756; P., 250.

Barger, *George*, and *Hooper Albert Dickinson* **Jowett**, the synthesis of substances allied to epinephrine, T., 967; P., 205.

Barlow, *Percival Smith*, the osmotic pressure of sugar solutions in mixtures of alcohol and water, P., 242.
osmotic experiments on mixtures of alcohol and water, A., ii, 507.
Barlow, *William E.*, a globulin occurring in the chestnut, A., i, 397.
Barmwater, [*Peter Heinrich*] *Ferdinand*, gasometric estimation of metallic iron in *Ferrum redactum*, A., ii, 654.
Barnard, *Edith E.* See *Julius* **Stieglitz**.
Barnes, *Howard Turner*, *Ebenezer Henry* **Archibald**, and *Douglas* **McIntosh**, molecular weight determinations by means of platinum thermometers, A., ii, 238.
Barnes, *James*, spectrum of magnesium, A., ii, 389.
Barnett, *Robert E.*, magnalium and other light alloys, A., ii, 636.
Baroni, *E.*, testing glass vessels as to neutrality, A., ii, 198.
Baroni, *E.*, and *G. B.* **Guidi**, testing effervescing sodium tartrate, so-called "effervescing citrate of magnesia," A., ii, 355.
Barrett, *William Fletcher*, *W.* **Brown**, and *Robert Abbott* **Hadfield**, physical properties of an extensive series of alloys of iron. IV. Thermal conductivity. V. Micro-structure, A., ii, 503.
Barrowcliff, *Marmaduke*. See *Frederick Belding* **Power**.
Barschall, *Hermann*. See *Friedrich* **Auerbach**.
Barsilowsky, *Jacob N.*, reaction of potassium ferricyanide with aromatic polyamines, A., i, 549.
Bartal, *A. von*, preparation and purification of carbon tetrabromide, A., ii, 450.
new fractionating tap, A., ii, 631.
action of sulphur on carbon tetrabromide, A., ii, 704.
Bartelt, *Eberhardt*. See *Wilhelm* **Vaubel**.
Barth, *Georg*, beer analysis by means of the refractometer, A., ii, 660.
Barthe, [*Joseph Paul*] *Léonce*, purification of pyridine, A., i, 546.
Bartlett, *K.* See *Hans* **Schönewald**.
Bartling, *Richard*, condensation of isodialuric acid with thiocarbamide, A., i, 420.
Bartow, *Edward*, and *A. W.* **Sellards**, preparation and nitration of *m*-ethyltoluene, A., i, 424.
Barvíř, *Heinrich L.*, [hornblende from Bohemia], A., ii, 176.
Basch, *E. E.*, decomposition of barium nitrate by heat, A., ii, 87.
use of barium carbonate for the purification of water, A., ii, 515.
Basci, *S.* See *Paul* **Pfeiffer**.
Baskerville, *Charles*, thorium, A., ii, 395.
purification of praseodymium, A., ii, 458.
Baskerville, *Charles*, and *L. B.* **Lockhart**, action of radium emanations on minerals and gems, A., ii, 622.
phosphorescence of zinc sulphide through the influence of condensed gases obtained by heating rare-earth minerals, A., ii, 624.
Baskerville, *Charles*, and *Fritz* **Zerban**, inactive thorium, A., ii, 95.
Bassett, *Harry Preston*. See *Harry Clary* **Jones**.
Bassett, *Henry*, *jun.* See *Antoine* **Guntz**.
Batěk, *Alexander*, separation of thorium and the cerite earths by normal sodium sulphite, A., ii, 461.
Batelli, *Angelo*, and *Annibale* **Stefanini**, nature of osmotic pressure, A., ii, 629.
Battelli, *Fr.*, and (*Mlle.*)*L.* **Stern**, mode of action of philocatalase, A., i, 623.
philocatalase and anti-catalase in animal tissues, A., ii, 406.
the substance which renders active the philocatalase in animal tissues, A., ii, 644.
Baud, *E.*, compounds of aluminium chloride with carbonyl chloride, A., ii, 525.
Baudran, *G.*, action of calcium permanganate on alkaloids, A., ii, 107.
action of calcium permanganate on tetanic and diphtheritic toxins and on tuberculin, A., ii, 407.
chemical oxydases, A., ii, 632.
Bauer, *Hugo*, action of organo-magnesium compounds on phthalic anhydride, A., i, 210.
action of organo-magnesium compounds on doubly unsaturated ketones, A., i, 278.
nature of the carbon double linking, A., i, 729.
apparatus for determining the melting point of asphalt, A., ii, 863.
Bauer, *Hugo*. See also *Arthur* **Hantzsch**.
Bauer, *Leo*. See *Robert* **Gnehm**.
Bauer, *O.* See *E.* **Heyn**.
Baum, *Erich*, [formation of furoyl derivatives by means of pyromucic chloride], A., i, 149.
apparatus for extracting liquids with chloroform, A., ii, 57.

Baum, *Erich*. See also *Franz* **Feist**.
Baumann, *Eugen*. See *Ernst* **Dorn**.
Baumann, *Luc.*, *Georges* **Thesmar**, and *Jos.* **Frossard**, formaldehyde sodium hydrogen hyposulphite, A., i, 260.
Baur, *Emil*, and *Gerardus Leonardus* **Voerman**, iron and chromium nitrides, A., ii, 715.
Baxandall, *F. E.* See (*Sir*) *Joseph Norman* **Lockyer**.
Baxter, *Gregory Paul*, revision of the atomic weight of iodine, A., ii, 81, 579.
Baxter, *Gregory Paul*, and *Harry Louis* **Frevert**, titration of ferrous iron with permanganate in presence of hydrochloric acid, A., ii, 653.
Baxter, *Gregory Paul*, and *Roger Castle* **Griffin**, estimation of phosphoric acid by means of ammonium phosphomolybdate. II., A., ii, 857.
Baxter, *Gregory Paul*, and *Charles H.* **Hickey**, pure nitrogen from nitrous and nitric oxides and ammonia, A., ii, 314.
Baxter, *Gregory Paul*, and *Murray Arnold* **Hines**, revision of the atomic weight of cadmium; analysis of cadmium chloride, A., ii, 321.
Baxter, *Gregory Paul*, and *Joaquin E.* **Zanetti**, estimation of oxalic acid by permanganate in presence of hydrochloric acid, A., ii, 490.
Bay, *Isidore*, action of diphenylamine on nitric acid, A., i, 340.
Bay, *Isidore*, and *Just* **Alix**, evolution of carbon in fuels, A., ii, 246.
Bayer & Co., *Friedrich*. See **Farbenfabriken vorm.** *Friedrich* **Bayer & Co.**
Bayliss, *William Maddock*, the kinetics of tryptic action, A., ii, 267.
Bayliss, *William Maddock*, and *Ernest Henry* **Starling**, relation of enterokinase to trypsin, A., ii, 273.
Bazlen. *Max*, hyposulphurous acid, A., ii, 240.
Béard, estimation of vanadium, A., ii, 288.
Bécamel, *G.* See *Charles* **Astre**.
Bechhold, [*Jacob*] *Heinrich*, theory of colloids, A., ii, 511.
formation of structures in jellies, A., ii, 513.
Beck, *Heinrich*. See *Martin* **Freund**.
Beck, *Karl*. See *Ernst* **Beckmann**.
Becker, *Georg*, estimation of parachymosis and time laws of human rennin ferment, A., ii, 732.
Becker, *George Ferdinand*, and *Arthur Louis* **Day**, the linear force of growing crystals, A., ii, 807.
Becker, *W.*, and *Julius* **Meyer**, atomic weight of silicon, A., ii, 246.
Beckmann, *Ernst* [*Otto*], modifications of the thermometer used in the determination of molecular weights and for the measurement of small differences of temperature, A., ii, 300.
determination of molecular weights in boiling concentrated sulphuric acid, A., ii, 676.
vapour current method for the determination of molecular weights at high temperatures, A., ii, 676.
lecture experiment for the demonstration of solid solutions, A., ii, 694.
estimation of higher alcohols in spirits, A., ii, 768.
Beckmann, *Ernst*, [with *Karl* **Beck** and *Hans* **Schlegel**], uses of metallic calcium, A., i, 335.
Beckurts, *Heinrich* [*August*], action of bromine on strychnine, A., i, 918.
Becquerel, [*Antoine*] *Henri*, radioactivation by means of uranium, A., ii, 567.
some properties of the α-rays of radium, A., ii, 665.
Becquerel, *Paul*, action of ethyl ether and chloroform on dry seeds, A., ii, 474.
action of liquid air on the life of seeds, A., ii, 604.
Bedford, *M. Hume*, columbates, A., ii, 831.
Beebe, *S. P.*, chemistry of malignant growths. III. Nucleo-histon as a constituent of tumours, A., ii, 408.
Beebe, *S. P.*, and *B. H.* **Buxton**, production of fat from proteid by *Bacillus pyocyaneus*, A., ii, 108.
new apparatus, A., ii, 514.
Beebe, *S. P.*, and *Philip* **Shaffer**, chemistry of malignant growths. IV. The pentose-content of tumours, A., ii, 742.
Beekman, *Johannes Willem*. See *Arnold Frederik* **Holleman**.
Beers, *William Herbert*. See *Percy Goldthwait* **Stiles**.
Beger, *Carl*. See *August* **Morgen**.
Béhal, *Auguste*, and *Marc* **Tiffeneau**, some phenolic ethers containing the ψ-allyl chain R·CMe:CH_2, A., i, 883.
Behre, *Paul*. See *Wilhelm* **Biltz**.
Behrend, [*Anton Friedrich*] *Robert*, [birotation of dextrose], A., i, 173.
Behrend, *Robert*, *Eberhard* **Meyer**, and *Franz* **Rusche**, condensation products from glycoluril and formaldehyde, A., i, 419.
Behrens, *Johann*. See *August* **Michaelis**.

Behrens, *Theodor Heinrich*, action of organic acids on metals of the cerium and yttrium groups, A., i, 167.
Beilby, *George Thomas*, phosphorescence caused by the beta and gamma rays of radium. Parts I. and II., A., ii, 293.
Beilby, *George Thomas*, and *H. N.* **Beilby**, influence of phase changes on the tenacity of ductile metals at the ordinary temperature and at the boiling point of liquid air, A., ii, 803.
Bein, *W.* See *J.* **Domke**.
Beisswenger, *Alfred*. See *Hugo* **Kauffmann**.
Beitzke and *Carl* **Neuberg**, anti-ferments, A., ii, 336.
Bell, *James M.*, free energy and heat capacity, A., ii, 434.
dineric equilibria, A., ii, 684.
Bell, *James M.*, and *Joseph Ellis* **Trevor**, fundamental functions of one-component ideal-constituent gases, A., ii, 374.
Bellars, *Albert Ernest*. See *Robert Selby* **Morrell**.
Bellenoux, *E. S.*, calcium nitrate in agriculture, A., ii, 478.
Bellier, *J.*, detection of foreign oils in nut oil, A., ii, 292.
new method of milk analysis, A., ii, 618.
Belloc, *G.*, osmosis through silica tubes, A., ii, 443.
Belloni, *E.* See *G.* **Biscaro**.
Bellucci, *Italo*, compound thiocyanates of palladium, A., i, 122.
hexahydroxyplatinic acid, A., ii, 327.
[platinum compounds], A., ii, 832.
Bellucci, *Italo*, and *E.* **Clavari**, higher oxide of nickel, A., ii, 823.
Bellucci, *Italo*, and *Nicola* **Parravano**, stannates, A., ii, 40.
new series of isomorphous salts, A., ii, 395.
Bellucci, *Italo*, and *Domenico* **Venditori**, Roussin's salts [nitrosulphides of iron], A., ii, 253.
nitrosulphides of iron, A., ii, 253.
Belton, *Frank G.*, existence of a definite lead potassium sulphate, A., ii, 457.
Bement, *Alburto*, improved Orsat apparatus, A., ii, 855.
Bemmelen, *Jakob Maarten van*, products of weathering of silicates in clay, volcanic, and laterite soils respectively, A., ii, 89.
absorption of water by clay, A., ii, 90.
metastannic and metazirconic acids, A., ii, 461.
Bender, *Carl*, estimation of sulphur in coal by Eschka's process, A., ii, 281.
Bender, *Friedrich*. See *Hans* **Reitter**.
Bendix, *Ernst*. See *Alfred* **Schittenhelm**.
Benedicks, *Carl* [*Axel Fredrik*], colloidal solutions, A., ii, 689.
Benedict, *Francis Gano*, and *Charlotte R.* **Manning**, estimation of water in foods and physiological preparations, A., ii, 349.
Benedict, *Stanley R.*, detection of acetates, cyanides, and lithium, A., ii, 123.
ions and cardiac rhythm, A., ii, 330.
detection of nickel [in presence of cobalt], A., ii, 861.
Benedict, *Stanley R.*, and *John Ferguson* **Snell**, detection of the more common acids, A., ii, 609.
Bengen, *F.*, and *Gunnar* **Haane**, the gastric mucous membrane and gastric juice of the pig, A., ii, 266.
Bennett, *Hugh Garner*. See *Julius Berend* **Cohen**.
Benrath, *Alfred*, oxidising action of ferric chloride in sunlight, A., i, 730.
action of concentrated weak acids on metallic chlorides, A., i, 734.
action of weak acids on metallic chlorides, A., ii, 705.
Benrath, *Alfred*, and *Fritz* **Sachs**, formation of hydrochloric acid in the stomach, A., ii, 731.
Bensemann, *R.*, analysis of saltpetre, A., ii, 481, 555.
Benzian, *Rudolf*, monocalcium silicate, A., ii, 523.
Berblinger, *Hans*. See *Roland* **Scholl**.
Berent, *Alexander von*. See *Carl Adam* **Bischoff**.
Berg, *Armand*, reaction of aldehydic sugars, A., i, 21.
Berg, *W. N.*, and *Henry Clapp* **Sherman**, estimation of ammonia in milk, A., ii, 351.
Bergell, *Peter*, and *Paul Friedrich* **Richter**, chemical constitution and diuretic action in the purine group, A., ii, 744.
Bergema, *F.* See *Johan Frederik* **Eijkman**.
Berger, *H. W.* See *George Augustus* **Hulett**.
Bergfeld, *Ludwig*. See *Friedrich* **Krafft**.
Bergmann, *Ed.* See *Max* **Busch**.
Berju, *Georg*, and *Wladislaus* **Kosinenko**, estimation of calcium oxide in burnt lime; solubility of calcium carbonate in solutions of ammonium nitrate, A., ii, 62.
Berl, *Ernst*, use of arsenic oxide in the catalysis of sulphur trioxide, A., ii, 315.

Berl, *Ernst.* See also *Georg* **Lunge** and *Alfred* **Werner.**
Bermbach, *P.*, precipitins and anti-precipitins, A., ii, 407.
anti-precipitins, A., ii, 730.
Bernard, *Ch.*, assimilation outside the organism, A., ii, 275.
Bernardinis, *Luigi de.* See *Gino* **Abbati.**
Bernhart, *Karl.* See *Wilhelm* **Koenigs.**
Bernheim, *René.* See *Wilhelm* **Autenrieth.**
Bernini, *Arciero*, influence of temperature on the electrical conductivity of lithium, A., ii, 222.
specific heats and latent heats of fusion of potassium and sodium, A., ii, 802.
Bernoulli, *August L.*, optical reflection constants and electromotive condition of chromium, A., ii, 1.
Bernthsen, *August*, formula of hyposulphurous acid, A., ii, 240.
Berstein, *Isaak*, *Carlo* **Fraschina**, and *Stanislaus von* **Kostanecki**, fisetin derivatives containing less oxygen, A., i, 606.
Berté, *Enrico*, saponification number and dry residue of oil of lemon, A., ii, 126.
indirect estimation of aldehydes in oil of lemon, A., ii, 656.
Berthelot, *Marcellin* [*Pierre Eugène*], changes effected by time on hydrocarbon substances of organic origin, A., i, 169, 501.
chemical effects of light; action of hydrochloric acid on platinum and gold, A., ii, 3.
emanations and radiations, A., ii, 3.
employment of alternating currents in chemistry and the theory of the reactions which they determine, A., ii, 7.
limits of sensitiveness of odours and emanations, A., ii, 20.
desiccation of plants and vegetable tissues; period of maturation not reversible; final equilibrium in average atmospheric conditions, A., ii, 50, 413.
absolute desiccation of plants and vegetable substances; period of artificial desiccation; reversibility by atmospheric moisture, A., ii, 51.
desiccation of plants; period of vitality; humectation by liquid water; reversibility imperfect, A., ii, 51.
some thermochemical rules relating to the possibility and prognostication of reactions, A., ii, 76.
Berthelot, *Marcellin* [*Pierre Eugène*], changes in the dimensions and volume of vegetable organs and tissues under the influence of desiccation, A., ii, 111.
metals found in the archæological excavations in Egypt, A., ii, 164.
use of the hot and cold tube in the study of chemical reactions, A., ii, 308, 810.
vessels of fused silica—their use in chemistry; permeability of vessels of fused silica, A., ii, 316, 386, 810.
chemical combination, A., ii, 378.
permeability of glass vessels, A., ii, 443, 810.
calorimetric methods, especially referring to the determination of the heat of combustion of organic compounds, A., ii, 504.
insoluble alkaline compounds formed by humic substances and their *rôle* in vegetable physiology and agriculture, A., ii, 759.
control experiments [over long periods of time], A., ii, 805.
Berthelot, *Marcellin*, and **Gaudechon**, thermochemical investigation of strychnine and brucine, A., ii, 301, 441.
Berti, *Pio*, potassium bromide as indicator when using Fehling's solution, A., ii, 57.
solutions of sugar and inorganic salts in dialysis, A., ii, 682.
asparagine substances [amino-acids in molasses], A., ii, 759.
Bertiaux, *L.* See *Auguste* **Hollard.**
Bertocchi, *C.*, composition of Milan milk, A., ii, 477.
Bertolo, *Pasquale*, decomposition products of a derivative of artemisin (1:4-dimethyl-β-naphthol and propionic acid), A., i, 224.
Bertolo, *Pasquale*, and *G.* **Ranfaldi**, two dehydropinacones of artemisin (artemisone and isoartemisone), A., i, 897.
Bertram, *H.*, oxidation by the urine, A., ii, 468.
Bertram, *H.* See also *Arthur* **Binz.**
Bertram, *W.*, action of aniline on anhydrocarboxylic acids, A., i, 465.
Bertrand, *Gabriel* [*Émile*], a new sugar from mountain-ash berries, A., i, 21.
synthesis and chemical nature of sorbieritol, A., i, 21.
adrenaline, A., i, 106.
coffee seeds without caffeine, A., ii, 648.
Bertrand, *Gabriel*, and *Jean* **Lecarme**, state of matter in the neighbourhood of the critical point, A., ii, 627.

Bertrond, *Ew.*, action of potassium hydroxide on a mixture of phenylacetylene and methyl*cyclo*hexanone, A., i, 775.
action of potassium hydroxide on a mixture of phenylacetylene and acetophenone, A., i, 775.
Berzelius, *Jöns Jacob* (*Freiherr*) *von*, presentation of engraving of, to the Society by Professor Retzius, P., 83.
Best, *Alfred*. See *Charles Edward* **Coates.**
Besthorn, *Emil*, and *J.* **Ibele,** a new class of quinoline dyes. II., A., i, 612.
Bethe, *Albrecht*, action of acids and alkalis on the staining reactions of animal tissues, A., ii, 468.
Bettels, *J.* See *Josef* **König.**
Betti, *Mario*, gas holder with constant outflow, A., ii, 310.
Betti, *Mario*, and *Curio Manio* **Mundici,** β-hydroxynaphthaldehyde, A., i, 213.
Bettink, *Hendrik Wefers*, detection of morphine in cases of poisoning, A., ii, 546.
Bettoni, *V.* See *Mario Giacomo* **Levi.**
Beulaygue, *L.*, evolution of the weight and the organic matters of leaves during necrobiosis in white light, A., ii, 51.
Bevan, *Edward John*. See *Charles Frederick* **Cross.**
Bevan, *P. V.*, physical properties of sodium vapour, A., ii, 819.
Beyerinck, *Martinus Willem*, and *A. van* **Delden,** bacteria which are active in the maceration of flax, A., ii, 749.
Beythien, *Adolf*, a case of bacterial deposition of iron in a water supply, A., ii, 473.
[volumetric] estimation of boric acid, A., ii, 765.
Beythien, *Adolf*, and *Paul* **Bohrisch,** composition of lemon juice, A., ii, 413.
Biach, *Otto*, regularities in homologous series, A., ii, 75.
Bial, *Manfred*, conjugated glycuronic acids in bile, A., ii, 643.
Biberfeld, *Joh.*, studies in diuresis. X. The situation in the kidney where foreign substances are excreted, A., ii, 48.
Biddle, *Henry C.*, derivatives of formhydroxamic acid and the possible existence of esters of fulminic acid, A., i, 180.
Bidet, *Félix*, chemical equilibrium of the system: ammonia and primary isoamylamine hydrochloride, A., i, 686.
Bierry, *H.*, animal lactase, A., ii, 406.
Bierry, *H.*, and *E. F.* **Terroine,** maltase of pancreatic juice, A., ii, 643.
Biesenbach, *Theodor*. See *Richard* **Stoermer.**
Bigelow, *Willard Dell*, and *Herbert C.* **Gore,** ripening of peaches, A., ii, 756.
Biilmann, *Einar*, preparation of thioacids and disulpho-acids, A., i, 625.
Bilinski, *Josef*, estimation of sugar in urine, A., ii, 289.
Billet, *J.* See *Maurice* **Doyon.**
Billeter, *Otto C.*, action of silver cyanate on acyl chlorides. IV. Methanesulphonylcarbimide, A., i, 560.
formation of anhydrides of sulphonic acids by the action of sulphonic chlorides on silver cyanate, A., i, 584.
Billeter, *Otto C.*, and *Henri* **Rivier,** [and, in part, *Al.* **Maret**], persubstituted dithiobiurets, A., i, 49.
Billitz, *Géza*, the composition of Lombardy milk, A., ii, 361.
Billitzer, *Jean*, theory of electrocapillary phenomena. III., A., ii, 225.
theory of colloids. II., A., ii, 305.
the conception of valency, A., ii, 448.
Billström, *J.* See *Johan Erik* **Johansson.**
Billy, *M.*, preparation of hyposulphites, A., ii, 318.
Bilsen, *Eduard*. See *Carl Adam* **Bischoff.**
Biltz, [*Johann*] *Heinrich*, oxidising chlorination of *o*-hydroxybenzaldehyde and of *p*-hydroxybenzaldehyde, A., i, 66.
action of acetylene on solutions of mercuric chloride, A., i, 165.
9:10-diphenylphenanthrene, A., i, 188.
hydroxydiphenyltriazine and hydroxydiphenyldihydrotriazine, A., i, 491.
apparatus for generation of hydrogen sulphide, &c., A., ii, 651.
Biltz, *Heinrich*, [with *Thankmar* **Arnd** and *Carl* **Stellbaum**], action of semicarbazide on benzil, benzoin, and allied substances, A., i, 673.
Biltz, *Heinrich*, and *Ernst* **Küppers,** preparation of di-iodoacetylene, A., i, 1.
Biltz, *Heinrich*, and *Otto* **Mumm,** action of acetylene on solutions of mercuric chloride; trichloromercuriacetaldehyde, A., i, 2.
Biltz, *Heinrich*, and *Carl* **Stellbaum,** preparation of cuminoin and cuminil, A., i, 653.

Biltz, [*Eugen*] *Wilhelm*, [theory of dyeing], A., i, 224.
protective action of salt on solutions of proteids, A., i, 251.
Biltz, *Wilhelm*, and *Paul* **Behre**, theory of dyeing. III. State of affinity of some sulphur dyes, A., ii, 808.
Biltz, *Wilhelm*, and *Willi* **Gahl**, ultramicroscopical observations. I. Separation of sulphur from thiosulphuric acid and of selenium from selenious acid, A., ii, 24.
decomposition of ammonium nitrite in aqueous solution and analogous changes, A., ii, 585.
Biltz, *Wilhelm*, *H.* **Much**, and *Carl* **Siebert**, adsorption theory of the neutralisation of toxins and related phenomena, A., i, 495.
Biltz, *Wilhelm*, and *Kurt* **Utescher**, theory of dyeing. II. Quantitative experiments on the formation of inorganic analogues of the substantive dyes, A., ii, 807.
Biltz, *Wilhelm*, and *Ernst* **Wilke-Dörfurt**, pentasulphides of rubidium and cæsium, A., ii, 162.
Binet du Jassonneix, *Armand*, reduction of manganese oxides by amorphous boron; preparation of a new manganese boride, A., ii, 90.
reduction of thorium oxide by amorphous boron and preparation of two thorium borides, A., ii, 597.
Binz, *Arthur* [*Heinrich*], sodium hyposulphite, A., ii, 318.
action of sodium polysulphide on sodium hyposulphite, A., ii, 521.
Binz, *Arthur*, and *H.* **Bertram**, evaluation of sodium hyposulphite, A., ii, 282.
Binz, *Arthur*. See also *Hermann* **Pauly**.
Biron, *Eugen von*, stannichlorides of the types $M_2'SnCl_6$ and $M''SnCl_6$. II., A., ii, 40.
Biscaro, *G.*, and *E.* **Belloni**, new constituent of milk. I., A., i, 671.
orotic acid. II., A., i, 672.
Bischoff, *Carl Adam*, Grignard's reaction with dihaloids, A., i, 589.
Bischoff, *Carl Adam*, [and, in part, with *Alexander von* **Berent**, *Leiba* **Fränkel**, *Andreas* **Jasinsky**, *Theodor* **Lanin**, *Wladimir* **Mironenko**, *Wassilij* **Peschudow**, *Israel* **Stein**, *Nasar* **Tobilewitsch**, *Saul* **Trozki**, *Eugen* **Winokurow**, and *Hellmuth* **Wulffius**], formation of chains. LXIII. and LXIV. Reactions of di-α-monobromobutyryldiarylethylenediamines and of di-α-monobromoisobutyryldiarylethylenediamines, A., i, 86.
Bischoff, *Carl Adam*, [and, in part *Eduard* **Bilsen**, *Simon von* **Meystowicz**, *Julius* **Päpke**, *Julius* **Radik**, *Dominik* **Rossi**, *Ludwig* **Schubetski**, *Johann* **Teletoff**, and *Hellmuth* **Wulffius**], formation of chains. LXV. Reactions of di-α-bromoisovaleryldiarylethylenediamines, A., i, 157.
Bischoff, *Carl Adam*, [and, in part, with *Emil* **Frölich**, *Iwan* **Jakowlew**, *Wulf* **Kissin**, *Wladimir* **Mazaraki**, *Jan* **Milewski**, and *Lasar* **Pildon**], formation of chains. LX. Reactions of the benzylanilide of α-bromopropionic acid and of di-α-monobromopropionyldiphenylethylenediamine, A., i, 84.
Bischoff, *Carl Adam*, [with *Benjamin* **Matz** and *Gabriel von* **Wodzinsky**], formation of chains. LXI. Reactions with di-α-propionylditolylethylenediamine, A., i, 85.
Bischoff, *Carl Adam*, [with *Michael* **Schtschegolew** and *Boris* **Soloweitschik**], formation of chains. LXII. Reactions of di-α-bromopropionyldinaphthylethylenediamine, A., i, 85.
Bistrzycki, [*Carl Anton*] *Augustin*, and *Eugen* **Reintke**, elimination of carbon monoxide from tertiary acids with concentrated sulphuric acid. II., A., i, 285.
Bjerrum, *Niels*, elimination of the diffusion potential between two dilute aqueous solutions by the insertion of a concentrated solution of potassium chloride, A., ii, 793.
Blacher, *Carl Johann*, and *U.* **Koerber**, estimation of combined sulphuric acid [in waters], A., ii, 552.
Black, *Otis Fisher*. See *Henry Barker* **Hill**.
Blackman, *F. Frost*, and *Gabrielle L. C.* **Matthaei**, vegetable assimilation and respiration. IV. Carbon dioxide assimilation and leaf temperature, A., ii, 750.
Blackman, *Philip*, new method of determining molecular weights, T., 1474; P., 228, 304.
molecular conductivity of water, P., 237.
Blaise, *Edmond Émile*, quadrivalent oxygen, A., i, 111, 255.
migration of ethylenic linking in alkyl allyl ketones, A., i, 118.
Blaise, *Edmond Émile*, and *Alfred Pierre* **Courtot**, direct fixation of organo-magnesium derivatives on the ethylenic linking of unsaturated esters, A., i, 257.
aldehydo-acids, A., i, 562.

Blaise, *Edmond Émile*, and *Alfred Pierre* **Courtot**, molecular transpositions and migration of carboxyl group in the dehydration of certain hydroxy-acids, A., i, 853.

Blaise, *Edmond Émile*, and *Armand* **Luttringer**, migration of the ethylenic linking in unsaturated open-chain acids, A., i, 168.

characterisation of lactones by means of hydrazine, A., i, 329.

α-alkylhydracrylic acids, A., i, 505.

α-alkylacrylic acids, A., i, 626.

Blake, *George Stanfield*. See *Wyndham Rowland* **Dunstan**.

Blake, *William P.*, iodobromite in Arizona, A., ii, 262.

Blakey, *W.* See *Barker* **North**.

Blanc, *G. A.*, radioactivity of mineral springs, A., ii, 221.

radioactive constituents of the deposits of Echaillon and Salins Moutiers, A., ii, 786.

Blanc, *Gustave* [*Louis*], synthesis of ββ-dimethyladipic acid, A., i, 15.

the reduction of the anhydrides of dibasic acids, A., i, 115.

ββ-dimethylbutyrolactone, A., i, 631.

synthesis of dibasic acids. I. and II., A., i, 680, 681.

Blanc, *Gustave*. See also *Louis* **Bouveault** and *Albin* **Haller**.

Blanchard, *Arthur Alphonzo*, decomposition of ammonium nitrite, A., ii, 237.

Blanck, *Edwin*, black soils of Legienen, Rössel, in East Prussia, A., ii, 54.

Blank, *Hugo*, chlorination of fatty acids, A., i, 405.

Blanksma, *Jan Johannes*, trinitroveratrole, A., i, 277.

intramolecular oxidation of a thiol (SH) group joined to a benzene nucleus by a nitro-group in the ortho-position, A., i, 425.

nitration and reduction of *s*-dinitrophenetole, A., i, 431.

replacement of atoms or groups of atoms by hydrogen in aromatic compounds during reduction, A., i, 761.

Blanksma, *Jan Johannes*. See also *William* **Alberda van Ekenstein**.

Blasdale, *Walter Charles*. See *Jacobus Henricus van't* **Hoff**.

Blau, *Edmund*, *p*-hydroxymethyldeoxybenzoins, A., i, 905.

Blau, *J.*, tridecyl alcohol, A., i, 166.

Bleisch, *C.*, and *P.* **Regensburger**, estimation of extract in malt, A., ii, 660.

Bloch, *Eugène*, electric conductivity of phosphorus emanation and of freshly prepared gases, A., ii, 72.

Bloch, *Siegfried*. See *Heinrich* **Wieland**.

Blom, *Axel*, and *Josef* **Tambor**, 3-methoxycoumaranone, A., i, 916.

Blondel, *Maurice*, platinum compounds, A., ii, 720.

Blount, *Bertram*, electric furnaces for laboratory use, A., ii, 238.

Bloxam, *William Popplewell*, our present knowledge of the chemistry of indigo, T., 974.

Blum, *L.*, alkaline reaction of strontium and calcium carbonates, A., ii, 163.

detection of small quantities of barium and strontium, A., ii, 204.

estimation of manganese as sulphide in ores containing barium, A., ii, 206.

detection of ferrous oxide in presence of ferric oxide, A., ii, 206.

detection of stannous tin, A., ii, 209.

Blume, *G.*, and *H.* **Klöffler**, simple preparation of pure ethylaniline from commercial ethylaniline, A., i, 875.

Blume, *Richard*. See *August* **Michaelis**.

Blumenthal, *Franz*, assimilation limits of sugars, A., ii, 333.

Blythswood, (*Lord*), and *H. S.* **Allen**, Dewar's method of producing high vacua, A., ii, 694.

Bock, *Johannes*, the action of cobalt-, rhodium-, and chromium-ammonium compounds on the animal organism, A., ii, 49.

Bock, *Karl*. See *Paul* **Duden**.

Boddaert, *R. J.* See *Arthur* **Fischer**.

Bode, *Konrad*. See *Max* **Scholtz**.

Boden, *H.* See *Wilhelm* **Windisch**.

Bodenstein, [*Ernst August*] *Max*, and *Friedrich* **Ohlmer**, heterogeneous catalytic reactions. III. Catalytic influence of silica on the reaction $2CO+O_2=2CO_2$, A., ii, 692.

Bodenstein, *Max*, and *Wilhelm* **Pohl**, measurements of equilibrium in the contact process of preparing sulphur trioxide, A., ii, 581.

Bodländer, *Guido*, and *Kasimir S.* **Idaszewski**, electrolytic behaviour of copper sulphide, A., ii, 390.

Bodländer, *Guido*, and *Richard* **Lucas**, causticising [of potassium carbonate], A., ii, 634.

Bodong, *Andreas*, hirudin, A., ii, 339.

Bodroux, *F.*, mode of formation of monosubstituted urethane derivatives, A., i, 427.

action of chloroacetates on magnesium haloid derivatives of aniline, A., i, 585.

Bodroux, *F.*, action of ethyl chloroacetate on the magnesium halogen compound of *o*-toluidine, A., i, 643.

Böck, *Friedrich*, anthragallolamide [2-amino-1:3-dihydroxyanthraquinone], A., i, 531.

Böcker, *Erich*. See *Walther* **Borsche** and *Otto* **Wallach**.

Böckh, *Hugo* and *Koloman* **Emszt**, janosite, a new hydrated normal ferric sulphate, A., ii, 536.

Bödtker, *Eyvind*, cystinuria, A., ii, 741.

Böhm, *Egon*, fluorides of the heavy metals, A., ii, 249.

Böhme, *A.*, action of camphor on the frog's heart poisoned with chloral hydrate, A., ii, 410.

Böhme, *E.*, preservation and action of the nitrogen of urine, A., ii, 477.

Boehringer & Söhne, *C. F.*, 8-aminoparaxanthine and its derivatives, A., i, 230.

8-aminotheophylline and its alkyl and aryl derivatives, A., i, 230.

Boericke, *F.*, electromotive behaviour of bromine and the anodic potential in the electrolysis of neutral solutions of potassium bromide, A., ii, 222.

Boeseken, *Jacob*, Friedel and Crafts' reaction, A., i, 268, 424.

Friedel and Crafts' reaction. V. Formation of dichlorodiphenylmethane by the action of carbon tetrachloride on benzene, A., i, 423.

Friedel and Crafts' reaction. VII. Action of sulphur or sulphur chlorides on benzene in presence of aluminium chloride, A., i, 583.

Bogdan, *Stefan*. See *Philippe A.* **Guye**.

Bogel, *Hans*. See *Conrad* **Willgerodt**.

Bogert, *Marston Taylor*, and *Victor John* **Chambers**, synthesis of 5-nitro-4-ketodihydroquinazolines from 6-nitro-2-aminobenzoic acid, 6-nitro-2-acetylaminobenzoic acid, and from the corresponding nitroacetylanthranil, A., i, 612.

Bogert, *Marston Taylor*, and *Arthur Wayland* **Dox**, condensation of ethyl succinylsuccinate with guanidine; derivative of 1:3:6:8-naphthatetrazine, a new heterocycloid, A., i, 841.

condensation of ethyl succinylsuccinate with acetamidine; 4:9-dihydroxy-2:7-dimethyl-5:10-dihydro-1:3:6:8-naphthatetrazine, A., i, 949.

Bogert, *Marston Taylor*, and *Alfred* **Hoffman**, some acyl derivatives of homoanthranilonitrile [3-amino-*p*-toluonitrile] and the 4-keto-7-methyldihydroquinazolines prepared therefrom, A., i, 891.

Bogert, *Marston Taylor*, and *Harvey Ambrose* **Seil**, synthesis of 5-nitro-4-keto-2-methyldihydroquinazolines from 6-nitroacetylanthranil and primary amines, A., i, 945.

Bogert, *Marston Taylor*, and *S. H.* **Steiner**, synthesis of 7-nitro-4-keto-2-alkyldihydroquinazolines from 4-nitroacetylanthranilic acid and from 4-nitroacetylanthranil, A., i, 945.

Bogert, *Marston Taylor*, and *Ralph Garrigue* **Wright**, nitro-derivatives of fluorescein, A., i, 896.

Bogojawlensky, *Alex. D.*, relation of the specific heats of crystalline substances to temperature, A., ii, 799.

Bogojawlensky, *Alex. D.*, and *J.* **Narbutt**, esterification experiments, A., i, 854.

Bogorodsky, *Alexis*, electrical conductivity of potassium and sodium nitrates and of fused mixtures of the two nitrates together and with other salts, A., ii, 669.

electrolysis of the fused nitrates of potassium, sodium, and lithium, A., ii, 705.

relation of lead iodide to water and oxygen, A., ii, 711.

Boguski, *Jossif Juri von*, solubility of sulphur in benzyl chloride and some properties of these solutions, A., ii, 312.

Bohr, *Christian*, absorption-coefficients of blood and blood-plasma for gases, A., ii, 729.

Bohr, *Christian*, and *Vilh.* **Maar**, influence of ozone on the lungs, A., ii, 329.

Bohrisch, *Paul*. See *Adolf* **Beythien**.

Boisbaudran, *Paul Émil (dit François) Lecoq de*, the element **Zδ**, A., ii, 89.

Bois Reymond, *R. du*, condition of water in the tissues, A., ii, 100.

Bokorny, *Thomas*, the reactions of living cells to very dilute solutions of various substances, A., ii, 476.

reactions of living cells to dilute solutions of heavy metallic salts, A., ii, 752.

Bolle, *Jules*, and *Philippe A.* **Guye**, surface tensions of some organic liquids, A., ii, 233.

Bollenbach, *Hermann*. See *Max* **Dittrich**.

Bolton, *Werner von*, tantalum; its preparation and properties, A., ii, 258.

hardness of hammered tantalum, A., ii, 718.

Boltwood, *Bertram Borden*, origin of radium, A., ii, 295.

Boltwood, *Bertram Borden*, production of radium from uranium, A., ii, 663.
the ultimate disintegration products of the radioactive elements, A., ii, 788.

Boltwood, *Bertram Borden*. See also *Ernest* **Rutherford**.

Bondi, *Erich*. See *Rudolf* **Wegscheider**.

Bone, *William Arthur*, and *George William* **Andrew**, the combustion of acetylene, T., 1232; P., 220.

Bone, *William Arthur*, and *Henry Llewellyn* **Smith**, the thermal decomposition of formaldehyde and acetaldehyde, T., 910; P., 171.

Bonjean, *Edmond*, hydrogen peroxide in the nascent state; bactericidal action on microbes in water, A., ii, 190.

Bonner, *Walter D.* See *Frederick Jacob* **Alway**.

Bonnet, *Frederic, jun.*, colorimetric method for the detection and estimation of formaldehyde, A., ii, 488.

Bordas, *Fréd.*, and **Touplain**, rapid method for the analysis of milk, A., ii, 490.

Bordier, *H.*, demonstration of *n*-rays, A., ii, 6.

Borgo, *Alessandro*. See *Girolamo* **Mazzara**.

Borgström, *Leonard H.*, meteorites of Hvittis and Marjalahti, A., ii, 537.
separation of iron from nickel and cobalt by aid of formic acid, A., ii, 557.
the Shelburne meteorite, A., ii, 726.

Bork, *Iwan*, action of potassium hydroxide on a mixture of phenylacetylene with methyl ethyl ketone: synthesis of phenylacetylenylmethylethylcarbinol, A., i, 774.
action of potassium hydroxide on a mixture of phenylacetylene and methyl isopropyl ketone: synthesis of phenylacetylenylmethylisopropylcarbinol, A., i, 774.

Bornstein, *Karl*, sulphur and phosphorus metabolism on an abundant proteid diet, A., ii, 99.

Borsche, *Walther* [*Georg Rudolf*], [relations between quinonehydrazones and *p*-hydroxyazo-compounds], A., i, 161.
new reaction of semicarbazones. III. Preparation of the hydrazides of aromatic substituted carbamic acids from semicarbazide, A., i, 305.

Borsche, *Walther*, and *Erich* **Böcker**, constitution of aromatic purpuric acids. VI. The purpurate reaction with 2:6-dinitrophenols, A., i, 51.

Borsche, *Walther*, and *G.* **Gahrtz**, constitution of the aromatic purpuric acids. VII. Ethyl 3:5-dinitrosalicylate and potassium cyanide, A., i, 894.

Borsche, *Walther*, and *W.* **Lange**, cyclohexanesulphonic acid, A., i, 765.

Borsche, *Walther*, and *K. A.* **Ockinga**, relation between quinonehydrazones and *p*-hydroxyazo-compounds. II. New class of hydroxyazo-compounds, A., i, 719.

Bose, *Emil*, heats of mixture of acids, A., ii, 801.

Bose, *Margrete*, anodic decomposition during the electrolysis of certain thallium, bismuth, and silver salts, A., ii, 299.

Bošnjaković, *S.*, new gas-evolution apparatus, A., ii, 20.

Bosworth, *Alfred W.* See *Burt Laws* **Hartwell**.

Bouchonnet, *A.*, azelaic acid derivatives, A., i, 566.

Bouchonnet, *A.* See also *Camille* **Chabrié**.

Boudouard, *Octave*, influence of water vapour on the reduction of the oxides of iron by mixtures of carbon monoxide and carbon dioxide, A., ii, 91.
influence of water vapour on the reduction of carbon dioxide by carbon, A., ii, 633.

Bougault, *J.*, action of iodine and yellow oxide of mercury on acids containing an ethylenic linking; separation of isomerides, A., i, 9.
detection of sodium salts [by means of potassium pyroantimoniate], A., ii, 421.

Boullanger, *E.*, and *L.* **Massol**, action of ammonium salts on the nitrification of sodium nitrite by the nitric ferment, A., ii, 547.

Boulouch, *R.*, phosphorus subiodide and the *rôle* of this substance in the allotropic transformation of phosphorus, A., ii, 633.

Boulud. See *Raphael* **Lépine**.

Bourcet, *Paul*, detection of antipyrine in dimethylaminoantipyrine [amidopyrine], A., ii, 561.

Bourion, *François*. See *Camille* **Matignon**.

Bourquelot, *Émile* [*Elie*], and *Émile* **Danjou**, sambunigrin, a new cyanogenetic glucoside obtained from the leaves of *Sambucus nigra*, A., i, 912; ii, 605.

Bourquelot, *Émile*, and *Henri* **Hérissey**, aucubin, the glucoside of *Aucuba japonica*, A., i, 364.

Bourquelot, *Émile*, and *Henri* **Hérissey**, presence of trehalase in Fungi, A., ii, 113.
source and composition of the essential oil of Herb Bennett root: a new glucoside and enzyme, A., ii, 345.
Bousfield, *William Robert*, the purification of water by continuous fractional distillation, T., 740.
ionic sizes in relation to the conductivity of electrolytes, A., ii, 369.
Bousfield, *William Robert*, and *Thomas Martin* **Lowry**, electrical conductivity and other properties of sodium hydroxide in aqueous solution as elucidating the mechanism of conduction, A., ii, 135, 298.
Bouveault, *Louis*, modes of formation and preparation of aliphatic aldehydes and a general synthetical method for the preparation of aldehydes, A., i, 116.
Bouveault, *Louis*, and *Gustave* **Blanc**, hydrogenation of esters of unsaturated acids, A., i, 11.
hydrogenation of esters of acids with an acetal function, A., i, 12.
reduction of esters of hydroxy- and ketonic acids, A., i, 13.
camphene, camphenylone, isoborneol, and camphor, A., i, 222.
Bouveault, *Louis*, and *René* **Locquin**, preparation of α-ketonic acids and esters from α-oximino-esters. Part V., A., i, 10.
preparation of α-substituted β-ketonic acids and of ketones of the aliphatic series, A., i, 18.
preparation of α-diketone mono-oximes of the type R·CO·CR′:N·OH, A., i, 19.
general method for the preparation of α-diketones, A., i, 20.
reduction of α-oximino-esters; synthesis of homologues of glycine and their esters, A., i, 32.
new synthesis of racemic leucine, A., i, 33.
preparation, use, and recovery of semicarbazide, A., i, 178.
action of sodium on aliphatic esters, A., i, 560.
derivatives of butyroin and hexonoin, A., i, 572.
synthesis of a new leucine, A., i, 636.
Bouveault, *Louis*, and *André* **Wahl**, the non-existence of two stereoisomerides of ethyl αβ-dioximinobutyrate, A., i, 257.
preparation of αβ-diketobutyric esters, A., i, 409.
reactions of diketobutyric esters, A., i, 410.
Bouveault, *Louis*, and *André* **Wahl**, preparation of ethyl nitrosoacetoacetate, A., i, 506.
isonitrosomethyliso-oxazolone, A., i, 612.
Bowack, *Douglas Anderson*, and *Arthur* **Lapworth**, hydrizino-halides derived from oxalic acid, T., 1854; P., 257.
Bowen, *Wilbur Pardon*. See *George Oswin* **Higley**.
Boycott, *Arthur Edwin*, gaseous metabolism of rabbits' small intestine, A., ii, 540.
Boycott, *Arthur Edwin*, and *John Scott* **Haldane**, effects of high external temperature on the body temperature, respiration, and circulation in man, A., ii, 729.
Boycott, *Arthur Edwin*. See also *John* **Fawcett**.
Boyd, *David Runciman*, and *John Edmund* **Pitman**, note on the Zeisel reaction in the case of di-ortho-substituted phenolic ethers, T., 1255; P., 221.
Bradley, *Harold C.* See *Lafayette Benedict* **Mendel**.
Bradley, *Walter Parke*, *Arthur Wesley* **Browne**, and *C. F.* **Hale**, effect of mechanical vibration on carbon dioxide near the critical temperature, A., ii, 75.
Braehmer, *Fritz*. See *Franz* **Fischer**.
Bragg, *William Henry*, absorption of α-rays and the classification of the α-rays from radium, A., ii, 4.
α-particles of radium, A., ii, 791.
Bragg, *William Henry*, and *R.* **Kleeman**, ionisation curves of radium, A., ii, 5.
Brame, *John Samuel Strafford*, the action of acetylene on aqueous and hydrochloric acid solutions of mercuric chloride, T., 427; P., 119.
Brand, *Joseph*, rapid method for the detection of traces of zinc in worts, beer, wine, &c., A., ii, 653.
Brand, *Kurt*, preparation of β-arylhydroxylamines by the electrochemical reduction of aromatic nitro-compounds, A., i, 770.
Brat, *H.*, [physiological] action of barium chloride and of barutine, A., ii, 846.
Brau and **Denier**, preparation of cholera toxin, A., ii, 747.
Braun, *Hans J.* See *Arthur* **Rosenheim**.
Braun, *Julius von*, α-naphthoyltetrahydroquinoline, A., i, 236.
separation of conium alkaloids, A., i, 811.

Braun, *Julius von*, and *Carl* **Müller**, new method for the conversion of primary diamines into chlorinated amines and into dichlorides, A., i, 634.
synthesis of hexamethylenediamine and heptamethylenediamine from piperidine, A., i, 636.
Braun, *Julius von*, and *Adolf* **Steindorff**, 2-methyldihydroindole, A., i, 81.
conversion of tetrahydroquinoline into 2-methyldihydroindole, A., i, 156.
ε-halogen derivatives of amylamine, A., i, 206.
synthesis of chroman, A., i, 294.
derivatives of the pentamethylene series, A., i, 341.
preparation of the decomposition products (containing halogens) from piperidine, A., i, 596.
γ-coniceine. I., A., i, 812.
synthesis of hexamethyleneimine—the cyclic homologue of piperidine, A., i, 826.
Braun, *Karl*, a substance which inhibits the fat-splitting action of the seed of *Abrus precatorius*, A., ii, 113.
estimation of moisture and free alkali in soaps, A., ii, 427.
estimation of glycerol in lyes, A., ii, 616.
Braune, *Hjalmar*, rapid estimation of nitrogen in steel or iron, A., ii, 60.
influence of nitrogen on iron and steel, A., ii, 638.
Brauns, *D. H.*, quercitrin, A., i, 74.
Bray, *W. C.*, use of the differential equation in calculating the results of kinetic measurements; the reaction between arsenic acid and potassium iodide near the equilibrium, A., ii, 690.
Bredig, *Georg*, and *Friedrich* **Epstein**, rate of chemical auto-heating (adiabatic reaction kinetics), A., ii, 75.
Bredig, *Georg*, and *W.* **Fraenkel**, a new case of catalysis by hydrogen ions, A., ii, 692.
Bredig, *Georg*, and *Ernst* **Wilke**, periodic contact catalysis. II., A., ii, 151.
Breger, *Marie*, and *Stanislaus von* **Kostanecki**, a second synthesis of apigenin, A., i, 366.
Breteau, *Pierre*, hydrides of phenanthrene, A., i, 338.
Breuil, *Pierre*, special constituent obtained in the tempering of an aluminium bronze, A., ii, 252.
Breyer, *Hans*. See *Paul* **Grützner**.
Brieger, *Ludwig*, and *M.* **Krause**, spear poison of the Cameroons, A., ii, 411.
Briggs, *John Frederick*. See *Charles Frederick* **Cross**.
Brill, *Otto*, use of the micro-balance in analysis, A., ii, 198.
dissociation of the carbonates of the alkaline earths and of magnesium carbonate, A., ii, 522.
Brislee, *Francis Joseph*, potential of the hydrogen-oxygen cell, A., ii, 133.
Brislee, *Francis Joseph*. See also *Robert* **Luther**.
Bristol, *Howard Stanley*. See *Henry Lord* **Wheeler**.
Brochet, *André* [*Victor*], and *Joseph* **Petit**, influence of the nature of the anode on the electrolytic oxidation of potassium ferrocyanide, A., i, 38.
electrolytic preparation of barium platinocyanide, A., i, 39.
electrolysis by alternating currents, A., ii, 7, 227, 672, 673.
action of potassium cyanide solution on various metals, A., ii, 27.
action of potassium cyanide on metallic electrodes, A., ii, 27.
theory of the dissolution of metals in potassium cyanide solution under the influence of an alternating current, A., ii, 28.
electrolysis of organic acids by means of an alternating current, A., ii, 227.
electrolytic solution of platinum in sulphuric acid, A., ii, 260.
Brodie, *Thomas Grigor*. See *Joseph* **Barcroft**.
Broeksmit, *T. C. N.*, lead malate and barium citrate, A., ii, 868.
Brönsted, *J. N.*, reduction of mercurous chloride by silver, A., ii, 133.
Bronson, *Howard L.*, effect of high temperatures on the rate of decay of the active deposit from radium, A., ii, 567.
Brown, *Adrian John*, the influences regulating the reproductive functions of *Saccharomyces cerevisiæ*, T., 1395; P., 225.
Brown, *Adrian John*, and *Edmund Theodore* **Millar**, the liberation of tyrosine during tryptic proteolysis. A preliminary communication, P., 286.
Brown, *Bailey Edgar*. See *Frank Kenneth* **Cameron** and *Oswald* **Schreiner**.
Brown, *Horace T.*, and *Fergusson* **Escombe**, variations in the amount of carbon dioxide in the air of Kew during the years 1898—1901, A., ii, 815.

Brown, *Horace T.*, and *Fergusson* **Escombe**, physiological processes of green leaves, with special reference to the interchange of energy between the leaf and its surroundings, A., ii, 849.
new method for the determination of atmospheric carbon dioxide, based on the rate of its absorption by a free surface of a solution of an alkali hydroxide, A., ii, 858.
Brown, *James*, interaction of hydrochloric acid and potassium permanganate in the presence of ferric chloride, A., ii, 166.
Brown, *James Campbell*, the latent heat of evaporation of benzene and some other compounds, T., 265; P., 75.
a precise method of estimating the organic nitrogen in potable waters, T., 1051; P., 208.
Brown, *Orville H.*, permeability of the membrane of Fundulus eggs, A., ii, 727.
Brown, *Orville H.*, and *Charles Claude* **Guthrie**, intravenous injection of bone-marrow extracts, A., ii, 745.
Brown, *Orville H.*, and *Charles Hugh* **Neilson**, influence of alkaloids and alkaloidal salts on catalysis, A., ii, 447.
Brown, *Orville H.* See also *Charles Hugh* **Neilson**.
Brown, *W.* See *William Fletcher* **Barrett**.
Brown, *William D.*, potassium percarbonate, A., ii, 818.
Browne, *Arthur Wesley*, synthesis of hydronitric acid [azoimide], A., ii, 449.
Browne, *Arthur Wesley*. See also *Walter Parke* **Bradley**.
Browning, *Carl H.* See *Robert* **Muir**.
Brückner, *Camillo*, reduction of sulphates, A., ii, 516.
Brühl, *Julius Wilhelm*, cinnamylidenecamphor and its reduction products, A., i, 293.
development of spectro-chemistry, A., ii, 781
Brühl, *Julius Wilhelm*, and *Heinrich* **Schröder**, the desmotropic form of substances of the ethyl acetoacetate type in the homogeneous state and dissolved in neutral media, P., 164; discussion, P., 164; A., i, 506.
sodium acetoacetate and the formation of analogous salts in solution, A., i, 170.
formation of salts in solution, especially in the case of substances exhibiting tautomerism (pseudo-acids, pseudo-bases), A., i, 407; ii, 70, 235.
Brugnatelli, *Luigi*, new mineral from the asbestos mines of the Lanterna Valley, A., ii, 173.
titanolivine from Val Malenco, Lombardy, A., ii, 176.
Brugsch, *Theodor*, proteid decomposition and acidosis in extreme hunger, A., ii, 404.
Bruhat, *J.*, and *H.* **Dubois**, perborates, A., ii, 246.
Brunck, *Otto*, action of sodium hyposulphite on metallic salts. II., A., ii, 95.
estimation of sulphur in coal, A., ii, 762.
Brunel, *Léon*, new additive compounds of tetrahydrobenzene, A., i, 123, 340.
thymomenthol [hexahydrothymol] and its derivatives, A., i, 197.
preparation of cyclohexene from cyclohexanol, A., i, 268.
ethers and esters of cyclohexanol, A., i, 274.
menthone derived from hexahydrothymol, A., i, 363.
derivatives of cyclohexane, A., i, 869.
Bruner, *Ludwik*, and *Stanislaw* **Tolloczko**, velocity of dissolution of solid substances, A., ii, 806.
Bruni, *Giuseppe*, copper and nickel salts of some amino-acids, A., i, 263.
racemism, A., ii, 69.
Bruni, *Giuseppe*, and *F.* **Finzi**, racemism, A., ii, 2.
Bruni, *Giuseppe*, and *Antonio* **Manuelli**, hydrolytic decomposition in non-aqueous solutions, A., ii, 689.
Bruni, *Giuseppe*, and *B.* **Sala**, dissociation of nitro-derivatives in certain solvents. III., A., ii, 146.
Bruni, *Giuseppe*, and *Ercole* **Tornani**, picrates and other additive products of unsaturated compounds, A., i, 269.
Bruni, *Giuseppe*, and *Arturo* **Trovanelli**, solid solutions and isomorphism, A., ii, 153
Brunner, *Arnold*. See *Emil* **Fischer**.
Brunner, *Erich*, rate of solution of zinc, A., ii, 235.
reaction velocity and free energy, A., ii, 236.
theory of the velocity of solution of arsenious oxide, A., ii, 386.
reactions which take place in several stages, A., ii, 511.
Brunner, *Heinrich*, action of an ammoniacal solution of silver oxide on salicylic acid and salicylaldehyde, A., i, 59.

Brunner, *Karl*, transformation of indolinones into alkyleneindolines, A., i, 468.
lecture experiments [decomposition of carbon dioxide by magnesium], A., ii, 381.
Bruns, *Daniel*, products of the condensation of opianic acid, A., i, 353.
tarconine methiodide and its relations to cotarnine and hydrocotarnine, A., i, 370.
Brust, *Eduard*. See *August* **Michaelis**.
Bruyn, *Balthasar Rutger de*, mechanism of the reaction by which γ-hydroxy-acids are converted into lactones, A., ii, 805.
Bruyn, *Cornelis Adriaan Lobry de*, obituary notice of, T., 570.
Bruyn, *Cornelis Adriaan Lobry de*, and *Sijbe* **Tijmstra**, *jun.*, mechanism of the synthesis of salicylic acid, A., i, 209.
mechanism of ether formation from alkyl haloid (or halogendinitrobenzene) and sodium alkyloxide, A., ii, 150.
Bucci, *G.* See *Federico* **Giolitti**.
Buchanan, *Florence*, an electrical response to excitation in *Desmodium gyrans*, A., ii, 752.
Buchanan, *John Young*, a method of determining the specific gravity of soluble salts by displacement in their own mother liquor, and its application in the case of the alkali halides, P., 122.
Bucherer, *Hans Theodor*, action of sulphites on aromatic amino- and hydroxy-compounds. II., A., i, 48.
nitriles of hydroxy- and amino-carboxylic acids, A., i, 59.
preparation of nitriles, A., i, 438.
Bucherer, *Hans Theodor*, and *A.* **Stohmann**, action of sulphites on aromatic amino- and hydroxy-compounds. III. Preparation of arylated β-naphthylamines and of ββ′-dinaphthylamines, A., i, 585.
Buchler & Co. See **Chininfabrik Braunschweig**.
Buchner, *Eduard*, and *Wilhelm* **Antoni**, further researches on cell-free fermentation, A., ii, 473.
Buchner, *Eduard*, and *Richard von der* **Heide**, enantiomorphism of the cyclopropanecarboxylic acids, A., i, 780.
Buchner, *Eduard*, and *Jakob* **Meisenheimer**, chemical reactions occurring during alcoholic fermentation, A., ii, 274.
Buchner, *Eduard*, and *Wilhelm* **Wedemann**, brominated cyclopropanedicarboxylic acids, A., i, 439.
Buchner, *Georg*, assay of beeswax, A., ii, 126.
Buck, *Christian*. See *Otto* **Fischer**.
Bülow, [*Theodor*] *Carl* [*Heinrich*], ethyl 1-camphyl-2:5-dimethylpyrrole-3:4-dicarboxylate and its derivatives, A., i, 231.
Bülow, *Carl*, and *Ivo* **Deiglmayr**, ethylacetylacetone and its condensation products with polyvalent phenols, A., i, 149.
Bülow, *Carl*, and *Max* **Deseniss**, formation of 2-acetyl-1:3-diketohydrindene by the interaction of phthalyl chloride and acetylacetone, A., i, 42.
Bülow, *Carl*, and *August* **Ganghofer**, dimethyl mesoxalate phenylhydrazone and its derivatives, A., i, 90.
Bülow, *Carl*, *Gustav* **Riess**, and *Constantin* **Sautermeister**, condensation products of semicarbazide and ethyl diacetylsuccinate, A., i, 660.
Bülow, *Carl*, and *Constantin* **Sautermeister**, three position isomeric hydroxyl derivatives of resacetein, A., i, 150.
Bülow, *Carl*, [with *Erwin* **Siebert**], coumarin derivatives from ethyl *o*-carboxy-phthalyl- and -benzyl-acetoacetates, A., i, 294.
ethyl phthalylacetoacetate, A., i, 529.
Bünz, *R.*, cholesterol esters in the brain, A., ii, 841.
Bünzly, *Hans*, and *Herman* **Decker**, oxidation of ββ-dinaphthol, A., i, 884.
Bünzly, *Hans*. See also *Herman* **Decker**.
Buff, *Max*. See *Theodor* **Zincke**.
Bugge, *Günther*. See *Ferdinand* **Henrich**.
Bukovansky, *Josef*. See *Johann* **Vaňha**.
Bullock, *William*, opsonic content of blood serum in health and in lupus, A., ii, 844.
Bunte, *Hans* [*Hugo Christian*], salts and substances for incandescent lighting, A., ii, 88.
Bunzl, *Felix*. See *Otto* **Diels**.
Buraczewski, *Józef*, and *Leon* **Marchlewski**, colouring matter of blood. III., A., i, 399.
Burdett, *Miss Frances*. See *Kennedy Joseph Previté* **Orton**.
Burger, *O.* See *Julius* **Sand**.
Burgess, *Charles Hutchens*, and *Alfred* **Holt**, *jun.*, some physical characters of the sodium borates, with a new and rapid method for the determination of melting points, A., ii, 162.
Burgess, *Charles Hutchens*. See also *David Leonard* **Chapman**.

Burián, *Richard*, oxidations with calcium permanganate; reply to Kutscher and Seemann, A., i, 725.
oxidation of nucleic acid with calcium permanganate; oxidation and synthetic formation of uric acid in extracts of ox liver; the source of endogenous purine in man and mammals, A., ii, 271.
uric acid, A., ii, 335.
Burke, *W. E.* See *Stewart Woodford* **Young.**
Burr, *Anton*, saponification of fat by ammonia in the Röse-Gottlieb method of estimating fat in milk, A., ii, 559.
estimation of fat in butter by Gottlieb's method, A., ii, 774.
Burrows, *Harry.* See *William Augustus* **Tilden.**
Burton-Opitz, *Russell*, changes in the viscosity of the blood produced by alcohol, A., ii, 98.
changes in viscosity of blood during narcosis, A., ii, 540.
Busch, *E.* See *R.* **Heerde.**
Busch, *Max* [*Gustav Reinhold*], *endo*-iminotriazoles, A., i, 307.
gravimetric estimation of nitric acid, A., ii, 282.
estimation of nitric acid in water, A., ii, 418.
Busch, *Max*, and *Ed.* **Bergmann,** *o*-aminoazo-dyes, A., i, 308.
Busch, *Max*, and *Arthur* **Rinck,** products of the action of magnesium organic compounds on alkylidene bases, A., i, 519.
Busch, *Max*, and *Wilh.* **Wolbring,** action of diazonium compounds on malonic acid, A., i, 493.
Butjagin, *P. W.*, chemical changes produced in flesh by Fungi, A., ii, 101.
Buxton, *B. H.* See *S. P.* **Beebe.**
Byers, *Horace Greeley*, and *Ebenezer Emmet* **Reid,** perchromic acid and the perchromates, A., ii, 37.
Byk, *Alfred*, possibility of resolving racemic compounds by circularly polarised light; the primary production of optically active substances, A., ii, 70.
relations between power of absorption of radiant energy and chemical character, A., ii, 566.

C.

Cady, *Hamilton P.*, concentration cells in liquid ammonia, A., ii, 569.
Cailler, *C.*, thermal conductivity of crystalline bismuth, A., ii, 10.
Cain, *John Cannell*, the diazo-reaction in the diphenyl series. Part II. Ethoxybenzidine, T., 5.
rate of decomposition of diazonium salts, A., i, 724.
constitution of ammonium salts, A., i, 747.
Cain, *John Cannell*, and *George Marshall* **Norman,** the action of water on diazosalts, P., 206, 308.
Caldarella, *A.* See *Francesco Carlo* **Palazzo.**
Caldwell, *Robert John*, hydrolysis of sucrose by *d*- and *l*-camphor-β-sulphonic acids, A., i, 22.
Calzolari, *Filippo.* See *Giuseppe* **Barbieri.**
Camerer, *William*, iron in mother's milk, A., ii, 183.
urea in human urine, A., ii, 186.
Cameron, *Adam.* See *James Colquhoun* **Irvine.**
Cameron, *Alexander T.*, variations in the crystallisation of potassium hydrogen succinate due to the presence of other metallic compounds in the solution, A., i, 259.
constitution of complex salts. I. Derivatives of the sesquioxides, A., ii, 529.
Cameron, *Frank Kenneth*, comparison of the organic matter in different soil types, A., ii, 346.
Cameron, *Frank Kenneth*, and *Bailey Edgar* **Brown,** solubility of calcium sulphate in solutions of other salts, A., ii, 388.
Cameron, *Frank Kenneth*, and *Atherton* **Seidell,** action of water on the phosphates of calcium, A., ii, 33.
Campbell, *Edward DeMille.* See *Alfred Holmes* **White.**
Campbell, *Norman R.*, radiation from ordinary materials, A., ii, 296.
radioactivity and chemical change, A., ii, 296.
Cannon, *Walter Bradford*, the passage of food stuffs from the stomach and through the small intestine, A., ii, 44.
movements of the alimentary canal after section of nerves, A., ii, 179.
Cantoni, *Carlo.* See *Max* **Le Blanc** and *Guido* **Pellizzari.**
Cantoni, *H.*, and *J.* **Chautems,** separation of arsenic, A., ii, 480.
Cantoni, *H.*, and *D.* **Diotalevi,** solubility of metallic succinates in water, A., i, 115.

Cantoni, *H.*, and *G.* **Goguelia**, decomposition of alkaline earth carbonates by alkali chlorides in presence of water, A., ii, 87.

Cantoni, *H.*, and *J.* **Passamanik**, decomposition of zinc carbonate by solutions of alkali chlorides, A., ii, 586.

Cantoni, *H.*, and (*Mlle.*) **Zachoder**, solubility of the tartrates of the alkaline earths in water, A., i, 14.

solubility of certain metallic tartrates in water, A., i, 633.

Capellmann, *R.* See *Arthur* **Heffter**.

Carapelle, *Eduardo.* See *Francesco Carlo* **Palazzo**.

Caravaggi, *A.* See *Giuseppe* **Plancher**.

Cari-Mantrand, *Maxime*, influence of invert sugar on the estimation of crystallisable sugar with reference to the yield of refined sugar, A., ii, 657.

Carlton, *Henry A.* See *Charles Loring* **Jackson**.

Carpini, *C.*, variation of the resistance of bismuth in a feeble magnetic field, A., ii, 72.

Carrara, *Giacomo*, and *L.* **D'Agostini**, electromotive force between metals and solutions of their salts in water and methyl alcohol, A., ii, 370.

Carrasco, *Oreste.* See *Giuseppe* **Plancher**.

Carré, *Paul*, decomposition of *o*-nitrobenzyl alcohol under the influence of aqueous and of alcoholic sodium hydroxide, A., i, 307.

esterification of polyhydric alcohols by phosphoric and phosphorous acids, A., i, 814.

decomposition of *m*- and *p*-nitrobenzyl alcohols under the influence of aqueous and of alcoholic sodium hydroxide, A., i, 889.

Carroll, *Charles G.* See *Harry Clary* **Jones**.

Carson, *Charles Macdonald.* See *William Robert* **Lang**.

Carveth, *Hector Russell*, and *B. E.* **Curry**, electrolytic chromium, A., ii, 460.

Carveth, *Hector Russell*, and *Wm. Roy* **Mott**, electrolytic chromium. I., A., ii, 394.

Casardi, *E.* See *Giorgio* **Errera**.

Caspari, *Wilhelm*, fat in milk, A., ii, 101.

vegetarianism, A., ii, 840.

Castellana, *Vincenzo*, transformation of pyrroles into derivatives of pyrazole, A., i, 941.

detection of nitrogen in organic substances, A., ii, 201.

detection of certain acids [boric and volatile organic], A., ii, 420.

Castellana, *Vincenzo*, and *Antonino d'*Angelo, diazoindoles, A., i, 940.

Castellana, *Vincenzo.* See also *Angelo* **Angeli** and *Alberto* **Peratoner**.

Catel, *J.* See *Alfred* **Guyot**.

Catford, *J. P.* See *Robert Charles* **Cowley**.

Cathcart, *Edward Provan*, formation of inactive arginine, A., i, 461.

inactive arginine, A., ii, 267.

proteolytic products of the splenic enzyme acting in an alkaline medium, A., ii, 404.

Cavalier, *Jacques*, and **Artus**, estimation of ammonia in potable waters, A., ii, 609.

Caven, *Robert Martin*, complex ammonium antimonious halides, P., 187.

Cernovodeanu, (*Mlle.*) *P.*, and *Victor* **Henri**, physicochemical study of hæmolysis, A., ii, 465.

Cervi, *Guido*, volumetric estimation of lead, A., ii, 63.

Cesáro, *Giuseppe*, crystals of *s*-tetrachloroisopropylformal, A., i, 570.

Chablay, *E.*, action of metalammonium compounds on halogen derivatives of methane, A., i, 502.

action of metalammonium compound on alcohols; general method for the preparation of alkyloxides, A., i, 502.

action of metalammonium compounds on polyatomic alcohols, A., i, 502.

Chabrié, [*Pierre*] *Camille*, and *A.* **Bouchonnet**, indium and rubidium fluorides, A., ii, 165.

Chace, *Ed. MacKay*, detection of saccharin in wine, A., ii, 292.

Chadwick, *Samuel*, *John Edwin* **Ramsbottom**, and *David Leonard* **Chapman**, the action of ultra-violet light on moist and dried mixtures of carbon monoxide and oxygen, P., 287.

Chambers, *Victor John.* See *Marston Taylor* **Bogert**.

Chanoz, *M.*, effect of membranes in liquid chains, A., ii, 626.

Chapman, *Alfred Chaston* [*Arthur William Henry*], palladium-hydrogen as a reducing agent in quantitative analysis, A., ii, 58.

Chapman, *Alfred Chaston*, and *Herbert Drake* **Law**, reducing action of hydrogen, A., ii, 695.

Chapman, *David Leonard*, and *Charles Hutchens* **Burgess**, cause of the period of chemical induction in the union of hydrogen and chlorine, A., ii, 236.

chlorine, A., ii, 697.

Chapman, *David Leonard*, and *Alfred* **Holt**, *jun.*, the synthesis of formaldehyde, T., 916; P., 171.

Chapman, *David Leonard.* See also *Samuel* **Chadwick.**

Chapman, *H. G.*, pancreatic secretion, A., ii, 838.

Chappel, *E. J.* See *William Arthur Harrison* **Naylor.**

Chapus, analysis of an intestinal gravel, A., ii, 272.

Charabot, *Eugène* [*Trophime*], and *Alexandre* **Hébert**, consumption of odoriferous substances in etiolated plants, A., ii, 276.

consumption of odoriferous products during the maturation of the flower, A., ii, 850.

Charabot, *Eugène*, and *G.* **Laloue**, formation and distribution of the essential oil of an annual plant, A., ii, 112.

successive distributions of estragole and terpenic compounds among the different organs of an annual plant, A., ii, 549.

Charitschkoff, *K. W.*, use of light petroleum and alcohol for the separation of oleic acid from stearic and other solid fatty acids, A., i, 405.

origin of naphtha, A., ii, 43.

Charpentier, *P. G.*, *Sterigmatocystis nigra* and oxalic acid, A., ii, 749.

Charters, *S. Barclay*, the aluminium rectifier, A., ii, 225.

Chattaway, *Frederick Daniel*, nitrogen halogen derivatives of the sulphonamides, T., 145; P., 7.

nitrogen halogen derivatives of the aliphatic diamines, T., 381; P., 61.

a contribution to the chemistry of *o*-benzoic sulphinide, T., 1882; P., 284.

Chattaway, *Frederick Daniel*, and *William Henry* **Lewis**, the action of hypobromous acid on piperazine, T., 951; P., 183.

Chautems, *J.* See *H.* **Cantoni.**

Chauvenet. See *William* **Oechsner de Coninck.**

Chavanne, *G.*, isopyromucic acid, A., i, 77.

Chavanne, *G.* See also *Robert* **Lespieau** and *Henri* **Moissan.**

Chella, *Silvio*, apparatus for measuring the absolute coefficient of internal friction of gases, A., ii, 629.

Chemische Fabrik auf Aktien (**vorm. *E.* Schering**), oxidation of isoborneol to camphor, A., i, 362.

methyleneoxyuvitic acid, A., i, 703.

preparation of camphor, A., i, 709.

Chemische Fabrik von *Friedr.* Heyden, derivatives of indoxylic acid, A., i, 647.

Chemische Fabrik vorm. Sandoz, [sulphonic acids of benzaldehyde], A., i, 141.

Chemische Fabrik vorm. Weiler-ter-Meer, azo-compounds from sulphonic acids of α-amino-β-naphthol, A., i, 161.

yellow sulphur dye from nitro-α-methylbenziminazole, A., i, 552.

Chenu. See *Henri* **Vittenet.**

Chevrotier, *J.* See *Auguste* **Lumière.**

Chikashigé, *Masumi*, oxymercuric perchlorates and the action of alcohol on mercury perchlorates, T., 822; P. 172.

Chilesotti, *Alberto*, two complex salts of molybdenum, A., i, 177.

Chilesotti, *Alberto*, and *A.* **Rozzi**, electrolytic estimation of molybdenum, A., ii, 484.

Chininfabrik Braunschweig; Buchler & Co., alkine esters of hydroxy-acids, A., i, 367.

Chittenden, *Russell Henry*, physiological economy in nutrition, A., ii, 179.

Cholin, *N.*, oxidation of indigo by potassium permanganate, A., i, 350.

Chonin, *G.*, new heptane: βδ-dimethylpentane, A., i, 729.

Chrétien, *H.* See *J.* **Tribot.**

Chrétien, *Paul*, compounds of hydroferrocyanic and sulphuric acids; sulpho-substitution in complex cyanides; hydroxyferrocyanides, A., i, 578.

Christensen, *A. C.*, dibromo-additive compounds of the cinchona alkaloids, A., i, 226.

estimation of metallic iron in *Ferrum redactum*, A., ii, 654.

Christoff, *A.*, absorption of carbon dioxide by aqueous salt solutions and binary liquid mixtures, A., ii, 806.

Christomanos, *Anastasios Karl*, solubility of phosphorus in ether and benzene, A., ii, 449.

Chsząszcz, *T.* See *Leopold* **Adametz.**

Chwolles, *Abraham.* See *Werner* **Esch.**

Ciamician, *Giacomo Luigi*, the development of the chemistry of pyrrole in the last quarter-century, A., i, 80.

Ciamician, *Giacomo Luigi*, and *Paul G.* **Silber**, chemical action of light. VIII. and IX., A., i, 335, 414.

Cingolani, *Masaniello.* See *Celso* **Ulpiani.**

Ciusa, *Roberto.* See *Gaetano* **Minunni.**

Claisen, *Ludwig*, mechanism of the ethyl acetoacetate syntheses, A., i, 258.

Claisen, *Ludwig*, [and, in part, *Reinhard* **Feyerabend**, *Rudolf* **Schulze**, and *Richard* **Gärtner**], syntheses with sodamide, A., i, 286.

Clapp, *Samuel Hopkins*. See *Treat Baldwin* **Johnson** and *Henry Lord* **Wheeler**.

Clark, *George Herbert*, amylolytic action of urine, A., ii, 540.

Clarke, *B. May*, determination of some heats of mixture, A., ii, 303.

Clarke, *Frank Wigglesworth*, action of silver nitrate and thallous nitrate on certain natural silicates, A., ii, 707.

Clarke, *Frank Wigglesworth*, and *George* **Steiger**, californite, A., ii, 725.

Clarke, *Latham*, preparation of certain amines, A., i, 427.

Clarke, *Latham*. See also *Charles Loring* **Jackson**.

Clarke, (*Miss*) *Rosalind*. See *Alfred* **Senier**.

Claus, *Richard*, and *Gustav* **Embden**, pancreas and glycolysis, A., ii, 179, 404.

Clausen, *H.*, fruit tree manures, A., ii, 478.

specific action of phosphoric acid on oat plants grown in black moor soil, A., ii, 607.

Claussner, *Paul*, Thiele's xylene-oxidation and terephthalaldehyde-green, A., i, 791.

Clavari, *E.* See *Italo* **Bellucci**.

Clayton, *Arthur*. See *Gilbert Thomas* **Morgan**.

Clément, *E.*, action of formic acid on tremors, A., ii, 408.

Closson, *Oliver E.* See *Lafayette Benedict* **Mendel** and *Frank Pell* **Underhill**.

Clowes, *Ernest Seabury*. See *John Charles* **Olsen**.

Clowes, *George Henry Alexander*, the theory of indicators and its bearing on the analysis of physiological solutions by means of volumetric methods, A., ii, 56.

Clowes, *George Henry Alexander*, and *W. S.* **Frisbie**, potassium and calcium in mouse tumours, A., ii, 743.

Coates, *Charles Edward*, and *Alfred* **Best**, hydrocarbons in Louisiana petroleum. II., A., ii, 833.

Coates, *Joseph Edward*. See *Kennedy Joseph Previté* **Orton**.

Cobb, *Percy W.*, action of pepsin, A., ii, 466.

carbohydrate metabolism in partially depancreated dogs, A., ii, 540.

Cochran, *C. B.*, estimation of fat in [milk, condensed milk, and malted] infant and invalid foods, A., ii, 618.

Coehn, *Alfred*, liquid crystals, A., ii, 14.

Coffetti, *Giulio*, and *Fritz* **Foerster**, cathode potentials necessary for the electrolytic deposition of certain metals from solutions of their sulphates, A., ii, 796.

Coffignier, *Ch.*, African copals, A., i, 224.

Cohen, *Ernst* [*Julius*], *Edward* **Collins**, and *Th.* **Strengers**, so-called explosive antimony. II., A., ii, 170.

Cohen, *Ernst*, and *E.* **Goldschmidt**, physico-chemical researches on tin. VI., A., ii, 168.

Cohen, *Ernst*, and *Th.* **Strengers**, so-called explosive antimony. III., A., ii, 532.

Cohen, *Julius Berend*, and *Henry Percy* **Armes**, the relation of position isomerism to optical activity. IV. The rotation of the menthyl esters of the isomeric nitrobenzoic acids, T., 1190; P., 218.

Cohen, *Julius Berend*, and *Hugh Garner* **Bennett**, studies in chlorination. The chlorination of the isomeric chloronitrobenzenes, T., 320; P., 80.

Cohen, *Julius Berend*, *Harry Medforth* **Dawson**, and *Percy Field* **Crosland**, studies in chlorination. II. The action of chlorine on boiling toluene. Preliminary notice, T., 1034; P., 211.

Cohen, *Julius Berend*, and *Percival* **Hartley**, studies in chlorination. III. The progressive chlorination of benzene in presence of the aluminium-mercury couple, T., 1360; P., 223.

Cohen, *Julius Berend*, and *Douglas* **McCandlish**, the mechanism of the hydrogen sulphide reduction of nitrocompounds, T., 1257; P., 222.

Cohen, *Julius Berend*, and *Israel Hyman* **Zortman**, the relation of position isomerism to optical activity. Part V. The rotation of the menthyl esters of the isomeric dibromobenzoic acids, P., 306.

Cohen, *Wilhelm*. See *Paul* **Jannasch**.

Cohn. See **Lassar-Cohn**.

Cohn, *Max*. See *Alexander* **Ellinger**.

Cohn, *Michael*, preparation of crystallised proteids, A., i, 103.

Cohnheim, *Otto*, carbohydrate combustion. III., A., ii, 267.

proteid-katabolism, A., ii, 839.

Colani, *A.*, preparation of binary metallic compounds by means of aluminium powder, A., ii, 525.

Collie, *John Norman*, syntheses by means of the silent electric discharge, T., 1540; P., 201; discussion, P., 202.

Collie, *John Norman*. See also *Edward Charles Cyril* **Baly**.

Collingwood, *Bertram James*, estimation of chloroform vapour by a tonometric method, A., ii, 121.
absorption of chloroform in later stages of anæsthesia, A., ii, 408.
Collingwood, *Bertram James*. See also *Augustus Désiré* **Waller**.
Collins, *Edward*. See *Ernst* **Cohen**.
Colman, *James*. See *Siegmund* **Gabriel**.
Colombano, *Amedeo*. See *Giuseppe* **Oddo**.
Colonna, *Ettore*, metallic formates and acetates, A., i, 852.
Colson, [*Jules*] *Albert*, the complexity of dissolved sulphates, A., ii, 34.
existence of a normal green chromic sulphate, A., ii, 94.
cryoscopy of the sulphates, A., ii, 255.
application of Watt's principle to the dissociation of the carbonates of lead and silver, A., ii, 304.
a variable velocity reaction of green chromic sulphate, A., ii, 460.
a chromium sulphate in which the acid is in two states of combination, A., ii, 592.
variations of basicity in chromium salts, A., ii, 639.
Comanducci, *Ezio*, and *R.* **Lobello**, action of ethyl isosuccinate on aniline, *p*-toluidine, and *p*-aminophenol, A., i, 271.
Conduché, *A.*, a new reaction of aldehydes, and the isomerism of their oximes, A., i, 288.
Cone, *Lee Holt*. See *Moses* **Gomberg**.
Coninck. See **Oechsner de Coninck**.
Conrad, *Max*, iminobarbituric and barbituric acids, A., i, 751.
Conrad, *Max*, and *A.* **Zart**, iminodialkylmalonylalkyl- and iminodialkylmalonylphenyl-carbamides, A., i, 752.
cyanodialkylacetylcarbamides and the amides of substituted malonic and cyanoacetic acids, A., i, 754.
Consortium für Elektrochemische Industrie, preparation of acetylene tetrachloride, A., i, 110.
Consortium für Elektrochemische Industrie & *Erich* Müller, electrolytic preparation of persulphates, A., ii, 83.
Coote, *Arthur Herbert*. See *William Richard Eaton* **Hodgkinson**.
Copaux, *H.*, physical properties of pure cobalt and pure nickel, A., ii, 254.
Coppet, *Louis Casimir de*, molecular depression of the freezing point of water produced by some very concentrated saline solutions, A., ii, 10.
Coriat, *Isidor H.*, production of choline from lecithin and brain tissue, A., ii, 47.
Corlette, *Cyril E.*, starch digestion in infants, A., ii, 466.
Cormimbœuf, *H.*, estimation of oxide of iron in pyrolusites, A., ii, 286.
detection of bromine in the presence of much iodine, A., ii, 416.
Cornu, *F.*, zeophyllite from Radzein, Bohemia, A., ii, 465.
Costachescu, *N.* See *Petrus* **Poni**.
Coste, *Maurice*, electrical conductivity of selenium, A., ii, 794.
Couréménos, *A.* See *Albin* **Haller**.
Courtauld, *Stephen Lewis*. See *Edward Frankland* **Armstrong**.
Courtet, *H.*, salts from the region of Lake Chad, A., ii, 173.
Courtot, *Alfred Pierre*. See *Edmond Émile* **Blaise**.
Cousens, *R. Lewis*, a radioactive substance discovered in the Transvaal and experiments connected therewith, A., ii, 787.
Couturier, *François*, and *Léon* **Meunier**, action of magnesium amalgam on acetone, A., i, 326.
Couturier, *François*, and *G.* **Vignon** new β-ketonic aldehydes, A., i, 570.
Cowley, *Robert Charles*, and *J. P.* **Catford**, estimation of arsenic, A., ii, 117.
Crampton, *Charles Albert*, and *Frank Darius* **Simons**, detection of palm oil when used as a colouring matter in oils and fats, A., ii, 362.
Craveri, *Mario*. See *Franz* **Sachs**.
Craw, *J. A.*, physical chemistry of the toxin-antitoxin reaction, with special reference to the neutralisation of lysin by antilysin, A., ii, 747.
Crestani, *G.* See *T.* **Gnesotto**.
Cribb, *Cecil Howard*, and *Francis William Frederick* **Arnaud**, the action of slightly alkaline waters on iron, A., ii, 589.
Cristofoletti, *U.* See *Alexander* **Tschirch**.
Crofton, *William Mervyn*, antibacterial sera, A., ii, 747.
Crofutt, *Edward Francis*. See *Yandell* **Henderson**.
Croner, *Fritz*, detection of traces of manganese in presence of iron in well waters, A., ii, 611.
Cronheim, *Walter*, nutritive value of proteid decomposition products. I., A., ii, 99.
Cronheim, *Walter*, and *E.* **Giesecke**, pond feeding experiments at Hellendorf and Geeste in 1903, A., ii, 649.
Crookes. *Samuel Irwin*. See *George* **Young**.

Crookes, (*Sir*) *William*, ultra-violet spectrum of gadolinium, A., ii, 250.
europium and its ultra-violet spectrum, A., ii, 392.
phosphorescent spectra of Sδ and europium, A., ii, 783.
Crosland, *Percy Field*. See *Julius Berend* **Cohen**.
Cross, *Charles Frederick*, and *Edward John* **Bevan**, constitution of cellulose, A., i, 119.
Cross, *Charles Frederick*, *Edward John* **Bevan**, and *John Frederick* **Briggs**, aceto-sulphates of cellulose, A., i, 512, 862.
Cross, *Charles Frederick*, *Edward John* **Bevan**, and *John* **Traquair**, acetyl derivatives of starch and cellulose, A., i, 511.
Crossley, *Arthur William*, and (*Miss*) *Nora* **Renouf**, synthesis of 1:1-dimethylhexahydrobenzene and of 1:1-dimethyl-Δ^3-tetrahydrobenzene, T., 1487; P., 209.
the supposed identity of dihydrolaurolene and of dihydroisolaurolene with 1:1-dimethylhexahydrobenzene, P., 303.
Cruser, *Frederick van Dyke*. See *Edmund Howd* **Miller**.
Curry, *B. E.* See *Hector Russell* **Carveth**.
Curtis, and *Paul* **Lemoult**, affinity of colouring matters for conjunctive tissues, A., ii, 600.
Curtiss, *Richard Sydney*, preparation of ethyl mesoxalate, A., i, 507.
Cushny, *Arthur Robertson*, and *A. Roy* **Peebles**, action of optical isomerides. II. Hyoscines, A., ii, 545.
Cusmano, *Guido*. See *Giuseppe* **Oddo**.
Cuthbertson, *Clive*, refractive indices of the elements, A., ii, 129, 293.
Cuthbertson, *Clive*, and *Edmund Brydges Rudhall* **Prideaux**, refractive index of gaseous fluorine, A., ii, 781.
Czernecki, *Wincenty*, creatine and creatinine in the organism, A., ii, 467.

Dadourian, *H. M.*, radioactivity of underground air, A., ii, 132.
D'Agostini, *L.* See *Giacomo* **Carrara**.
Dahmer, *Georg*. See *Friedrich Wilhelm* **Küster**.
Dakin, *Henry Drysdale*, the synthesis of substances allied to adrenaline, P., 154.
fractional hydrolysis of optically active esters by lipase, II., A., i, 556.
Dakin, *Henry Drysdale*, physiological action of synthetical substances allied to adrenaline, A., ii, 410.
Dakin, *Henry Drysdale*. See also *Albrecht* **Kossel**.
Dale, *Henry Hallett*, physiological action of chrysotoxin, A., ii, 545.
Dale, *Henry Hallett*. See also *Francis Arthur* **Bainbridge**.
Damond, *E.* See *Paul* **Freundler**.
Danjou, *Émile*. See *Émile* **Bourquelot**.
Danne, *J.*, a new radium mineral, A., ii, 133.
Danneel, *Heinrich*, ionic velocities, A., ii, 499.
Danneel, *Heinrich*, and *Lorenz* **Stockem**, position of the alkali and alkaline-earth metals in the electrochemical series at high temperatures, A., ii, 388.
Danzfuss, *Wilhelm*. See *August* **Michaelis**.
Darbishire, *Francis Vernon*, and *Jocelyn Field* **Thorpe**, note on the formation of β-methylglutaconic acid and of αβ-dimethylglutaconic acid, T., 1714; P., 239.
Darzens, *Georges*, hydrogenation of aromatic ketones by means of reduced nickel; new method of synthesising aromatic hydrocarbons, A., i, 66.
general method of synthesising aldehydes by means of the substituted glycidic acids, A., i, 116.
new method of synthesising saturated ketones by catalytic reduction, A., i, 172.
Daube, *Adolf*, ethylidenephthalide, A., i, 210.
Dauwe, *Ferdinand*, absorption of ferments by colloids, A., i, 623.
Daval, *L.* See *Gustave* **Patein**.
Davidson, *Emil*, the decomposition of potassium chlorate by hydrochloric acid a reaction of the first order, A., ii, 584.
Davidson, *Emil*. See also *Adalbert* **Kolb**.
Davies, *Llewellyn John*. See *James Scott* **Rowland**.
Davies, *Thomas Huws*. See *John Joseph* **Sudborough**.
Davis, *Bergen*, and *C. W.* **Edwards**, chemical combination of oxygen and hydrogen under the action of radium rays, A., ii, 448.
Davis, *Oliver Charles Minty*, the action of nitrogen sulphide on organic substances. Part III., T., 1831; P., 258.

Davison, *Alice L.*, electrolytic estimation of cadmium with the use of a rotating anode, A., ii, 859.
Dawson, *Harry Medforth*. See *Julius Berend* **Cohen**.
Day, *Arthur Louis*. See *George Ferdinand* **Becker**.
Debierne, *André*, gases produced by actinium, A., ii, 623.
Decker, *Herman*, [with *Hans* **Bünzly**, *Theodor von* **Fellenberg**, *Oskar* **Klauser**, and *Waslaw* **Wislocki**], relationships of doubly-linked carbon to nitrogen, oxygen, and sulphur, A., i, 667.
Decker, *Herman*, [with *Stephani* **Gadomska** and *Max* **Girard**], ammonium compounds. XIX. Nitration of quaternary cycloammonium nitrates, A., i, 469.
Decker, *Herman*, [with *Stephani* **Gadomska**, *Fani* **Sandberg**, and *Andreas* **Stavrolopoulos**], ammonium compounds. XVIII. Formation and decomposition of quaternary ammonium compounds of the inert bases, A., i, 374.
Decker, *Herman*, and *Otto* **Koch**, papaverinium bases, III., A., i, 472.
Decker, *Herman*, and *Percy* **Remfry**, quinoline derivatives. I. 5-Quinaldine derivatives, A., i, 828.
Decker, *Herman*, and *Boris* **Solonina**, nitrosophenol dyes. III., A., i, 197.
Decker, *Herman*. See also *Hans* **Bünzly**.
Decker, *O.* See *Carl* **Friedheim**.
Dehn, *William M.*, primary arsines, A., i, 184.
estimation of chlorine in urine, A., ii, 350.
Dehnel, *Erich*. See *Karl* **Reinking**.
Deibel, *W.* See *Hartwig* **Franzen**.
Deiglmayr, *Ivo*. See *Carl* **Bülow**.
Dejust, *Henri*, action of carbon monoxide on silver oxide; detection of traces of the gas in the atmosphere, A., ii, 453.
Dekhuyzen, *M. C.*, osmotic pressure of blood and urine in fishes, A., ii, 836.
Delaud. See *Émile* **Nicolas**.
Delden, *A. van*. See *Martinus Willem* **Beyerinck**.
Delorme, *J.* See *A.* **Astruc**.
Demoussy, *Em.*, vegetation in atmospheres rich in carbon dioxide, A., ii, 111.
Dempwolff, *C.*, migration of the ions in methyl alcohol as solvent, A., ii, 9.
Denier. See **Brau**.
Denigès, *Georges*, localisation of arsenic, A., ii, 745.
Denison, *Robert Beckett*, equilibrium between magnesium and sodium sulphates, A., ii, 456.
Denk, *Bruno*. See *Arthur* **Stähler**.
Dennstedt, *Max* [*Eugen Hermann*], simplified elementary analysis; a quick method, A., ii, 202.
simplified elementary analysis and its technical application, A., ii, 651.
Dennstedt, *Max*, and *F.* **Hassler**, estimation of sulphur in pyrites, A., ii, 761.
Derrien, *Eugène*. See *Jules* **Ville**.
Desch, *Cecil Henry*. See *Edward Charles Cyril* **Baly**.
Deseniss, *Max*. See *Carl* **Bülow**.
Desfontaines, *Marcel*. See *Albin* **Haller**.
Desgrez, *Alexandre*, and *J.* **Adler**, acid dyscrasia, A., ii, 102.
Desgrez, *Alexandre*, and *J.* **Ayrignac**, elimination of sulphur and phosphorus, demineralisation of the organism, and size of the molecule elaborated in skin diseases, A., ii, 104.
Desgrez, *Alexandre*, and (*Mlle.*) *Bl.* **Guende**, acid dyscrasia, A., ii, 406.
Desplantes, *Gaston*. See *Camille* **Matignon**.
Desvergnes, *Loys*, composition of an ancient English gunpowder, A., ii, 317.
Detscheff, *Theodor*. See *Alfred* **Werner**.
Deussen, *Ernst*, hydrogen fluoride. I. and II., A., ii, 311.
solubility of ferric oxide in hydrofluoric acid, A., ii, 459.
estimation of ferric oxide in presence of much alumina, A., ii, 484.
Deventer, *Charles Marius van*, explanation of the action of strong sulphuric acid on metals, A., ii, 383.
free iodine in alkaline solutions, A., ii, 417.
Dewar, (*Sir*) *James*, the thermo-electric junction as a means of determining the lowest temperatures, A., ii, 799.
studies with the liquid hydrogen and air calorimeters. I. Specific heats. II. Latent heats, A., ii, 801.
Dewar, (*Sir*) *James*, and *Robert Abbott* **Hadfield**, effect of liquid air temperatures on the mechanical and other properties of iron and its alloys, A., ii, 229.
Dhéré, *Charles*, ultra-violet absorption spectra of the purines, A., ii, 783.
Dick, *William Douglas*. See *Julian Levett* **Baker**.
Dickson, *Samuel*, estimation of oxygen in copper, A., ii, 479.

Dieckmann, *Walter*, α-chloroglutaconaldehyde [β-chloropenta-Δ$^{\alpha\gamma}$-diene-α-ol-ε-al], A., i, 411.
α-amino-derivatives of adipic acid, β-methyladipic acid, and pimelic acid, A., i, 417.
Dieckmann, *Walter*, *J.* **Hoppe**, and *Richard* **Stein**, interaction of phenylcarbimide with 1:3-dicarbonyl compounds, A., i, 135.
Dieckmann, *Walter*, and *Heinrich* **Kämmerer**, behaviour of hydrogen cyanide towards phenylcarbimide, A., i, 874.
Dieckmann, *Walter*, and *Ludwig* **Platz**, chloromalonaldehyde [β-chloro-Δ$^{\beta}$-propene-γ-ol-α-al], A., i, 117, 171.
a new method of formation of osotetrazones, A., i, 953.
Diels, *Otto*, cyanuric acid derivatives, A., i, 331.
Diels, *Otto*, and *Felix* **Bunzl**, attempts to synthesise fluorene derivatives, A., i, 431.
Diels, *Otto*, and *Hans* **Heintzel**, condensation of some esters with ethyl carbamate and with ethyl aminoacetate, A., i, 174.
Diels, *Otto*, and *Rudolf van der* **Leeden**, condensation of isonitrosoketones with aldoximes; formation of oxadiazines. I., A., i, 946.
Diels, *Otto*, and *Georg* **Plaut**, use of oximino-ethers in condensations, A., i, 509.
Diem, *E.* See *Carl* **Friedheim**.
Dienel, *Hans*, α-anthramine and α-anthrol, A., i, 767.
Dienert, *F.*, action of magnesium and of magnesia on microbes, A., ii, 190.
Dietrich, *Th.*, lime requirements of Hessian soils, A., ii, 114.
Dietrich, *Th.*, and *Felix* **Mach**, beet molasses of various origin A., ii, 55.
Dietz, *Rudolf*. See *Franz* **Mylius**.
Dijk, *G. van*, determination of the electrochemical equivalent of silver, A., ii, 137.
effect caused by heating the cathode of the silver voltameter to redness on the value of the electrochemical equivalent, A., ii, 625.
Dilthey, *Alfred*. See *Emil* **Fischer**.
Dimroth, *Otto*, new syntheses of diazoamino-derivatives. IV., A., i, 311.
desmotropic compounds, A., i, 383.
action of diazo-compounds on primary aliphatic amines, A., i, 618.
Dimroth, *Otto*, [with *Ernst* **Eberhardt** and *Eugen* **Letsche**], desmotropic compounds, A., i, 98.
Dimroth, *Otto*, [with *Hermann* **Stahl**], desmotropic compounds. II., A., i, 384.
Dimroth, *Otto*, and *Wilhelm* **Wislicenus**, methylazoimide, A., i, 422.
Dinan, estimation of phosphorus in phosphor-bronze, A., ii, 353.
assay of white metal, A., ii, 357.
Dinesmann, *Adolphe*, condensation of chloral with aromatic hydrocarbons under the influence of aluminium chloride, A., i, 645.
Diotalevi, *D.* See *H.* **Cantoni**.
Disdier, *F.*, action of pepsin on albumin precipitated by heat in presence of acid, A., i, 251.
Ditmar, *Rudolf*, action of radium rays on caoutchouc, A., ii, 72.
colloidalising action of caoutchouc on selenium, A., ii, 701.
Ditte, *Alfred*, action of mercuric iodide on sulphuric acid and mercury sulphates, A., ii, 391.
Dittrich, *Max* [*Georg Paul*], and *Hermann* **Bollenbach**, action of persulphates on haloids, A., ii, 239.
estimation of perchlorates, A., ii, 281.
Dittrich, *Max*, and *Richard* **Pohl**, estimation of zirconium in presence of titanium, especially in rocks, A., ii, 287.
Dittrich, *Max*, and *Adolf* **Reise**, estimation of lead by persulphate in acid solution, A., ii, 483.
Ditz, *Hugo*, the oxidising action of impure ether, A., i, 404.
oxidation of naphthalene to phthalic acid by concentrated sulphuric acid in presence of oxides or salts of rare metals, A., i, 516.
oxidising action of impure ether containing peroxide and its influence on Kreis's reaction, A., ii, 560.
action of concentrated hydrochloric acid on potassium chlorate in the presence of potassium iodide or bromide; estimation of chlorates, A., ii, 760.
Ditz, *Hugo*, and *Benjamin Max* **Margosches**, estimation of iodine in soluble iodides, also in the presence of bromides and chlorides, A., ii, 59.
Divers, *Edward*, Dunstan, Jowett, and Goulding's paper on the rusting of iron, P., 251; discussion, P., 253.
the products of heating silver nitrite, P., 281; discussion, P., 284.
Raschig's theory of the lead-chamber process, A., ii, 83.
theory of the action of metals on nitric acid, A., ii, 84.
constitution of Fremy's sulphazilate and of Pelouze's nitrosulphate, A., ii, 449, 517.

Divine, *Robert E.*, use of tannic acid in the estimation of alumina, A., ii, 205.

Dixon, *Augustus Edward*, and *John* **Hawthorne**, the tautomerism of acetyl thiocyanate, T., 468; P., 121.

Dixon, *Augustus Edward*. See also *Robert Elliott* **Doran**.

Dixon, *Harold Baily*, explosion waves, A., ii, 577.

Dixon, *Harold Baily*, and *E. C.* **Edgar**, atomic weight of chlorine, A., ii, 696.

Dixon, *Henry H.*, and *Joseph Theodore* **Wigham**, action of the radiations from radium bromide on some organisms, A., ii, 548.

Dixon, *Walter Ernest*, selective action of cocaine on nerve-fibres, A., ii, 106.

Dixon, *Walter Ernest*, and *Orlando* **Inchley**, an instrument for recording ciliary activity, A., ii, 542.

Dobbie, *James Johnston*, and *Charles Kenneth* **Tinkler**, the constitution of phenylmethylacridol, T., 269; P., 74.

the ultra-violet absorption spectra of certain diazo-compounds in relation to their constitution, T., 273; P., 75.

Dobrowolsky, *Stanislaw*. See *Michael I.* **Konowaloff**.

Doebner, *Oscar*, and *M.* **Kersten**, β-benzylmalic acid, A., i, 786.

Doebner, *Oscar*, and *L.* **Segelitz**, ethylmalic acid, A., i, 737.

Doht, *Richard*, iodophenylcarbamides, A., i, 49.

Dolgopoloff, *Th.* See *Pavel Iw.* **Petrenko-Kritschenko**.

Doliński, *J. H.*, solubilities of certain organic acids in water at various temperatures, A., i, 524.

Dolley, *J.* See *John James Rickard* **Macleod**.

Domentéeff, *A.*, chlorosis of plants, A., ii, 476.

Domergue, *A.*, flowers of sulphur and sublimed sulphur, A., ii, 82.

Dominicis, *Angelo de*, detection of hydrocyanic acid, A., ii, 746.

Domke, *J.*, and *W.* **Bein**, density and expansion of sulphuric acid in aqueous solution, A., ii, 157.

Donath, *Eduard*, estimation of manganese by means of hydrogen peroxide, A., ii, 766.

Donau, *Julius*, red colloidal solution of gold obtained by means of carbon monoxide, A., ii, 462.

Done, *Edward*. See *Percy Faraday* **Frankland**.

Donnan, *Frederick George*, formation of complexes; hydration and colour, A., ii, 806.

Dony-Hénault, *Octave*, new regulator for thermostats, A., ii, 142.

Doran, *Robert Elliott*, and *Augustus Edward* **Dixon**, the influence of temperature on the interaction between acetyl thiocyanate and certain bases. Thiocarbamides, including carboxy-aromatic groups, T., 331; P., 77.

Dormaar, *T. M. M.*, transformation of carvone and eucarvone into carvacrol and the velocity of this transformation, A., i, 222.

Dorn, *Ernst*, *Eugen* **Baumann**, and *Siegfried* **Valentiner**, action of radium emanations on pathogenic bacteria, A., ii, 748.

Dorp, *G. C. A. van*, constitution of ethyl 6:8-dinitrotetrahydroquinoline-1-carboxylate, A., i, 81.

Dorsch, *Robert*. See *Paul* **Wagner**.

Dott, *David Brown*, mercuric zinc cyanide, A., i, 695.

Doughty, *Howard Waters*. See *William Albert* **Noyes** and *William Stone* **Weedon**.

Dourlen, *Jacques*. See *René* **Duchemin**.

Dover, (*Miss*) *Mary Violette*. See *James Wallace* **Walker**.

Dox, *Arthur Wayland*. See *Marston Taylor* **Bogert**.

Doyon, *Maurice*, and *J.* **Billet**, selective action of chloroform on the liver, A., ii, 471.

Doyon, *Maurice*, *Albert* **Morel**, and *N.* **Kareff**, effect of phosphorus on the coagulation of blood; origin of fibrinogen, A., ii, 402.

Drabble, *Eric*, and *Hilda* **Lake**, effect of carbon dioxide on geotropic curvature of the roots of *Pisum sativum*, A., ii, 751.

Dresel, *Auguste*. See *Frédéric* **Reverdin**.

Dreser, *Heinrich*, acidity of urine, A., ii, 186.

Dreyer, *Friedrich*, and *Th.* **Rotarski**, properties of *p*-azophenetole, A., i, 952.

Drucker, *Karl*, dissociation of ternary electrolytes, A., ii, 371.

aqueous solutions of fatty acids, A., ii, 680.

Drude, *Oskar*, *A.* **Neumann**, and *Franz* **Ledien**, forcing experiments with shrubs by means of ether or chloroform, A., ii, 191.

Duane, *William*, ionisation due to radium emanation, A., ii, 219.

ionisation produced between parallel plates by radium emanation, A., ii, 297.

Duboin, *André* [*Grégoire*], preparation of double silicates of potassium with other bases, A., ii, 634.
heavy liquids containing alkali mercuric iodides, A., ii, 637.
Dubois, *H.* See *J.* **Bruhat.**
Dubois, *Wilbur L.*, estimation of sulphur and phosphoric acid in foods, fæces, and urine, A., ii, 609.
Dubreuil, *Louis*, action of pyridine and quinoline bases on bromosuccinic and dibromosuccinic esters, A., i, 14.
Duchemin, *René*, and *Jacques* **Dourlen**, the acidity of commercial ethyl alcohol and its variations at the ordinary temperature, A., i, 503.
Duclaux, *Jacques*, conductivity of colloidal solutions, A., ii, 432.
osmotic pressure of colloidal solutions, A., ii, 511.
Duden, *Paul*, *Karl* **Bock**, and *Herbert J.* **Reid**, aldehyde-ammonia, A., i, 568.
Duden, *Paul*, and *Georg* **Ponndorf**, *aci*-dinitro-alcohols. I., A., i, 558.
Dudgeon, *Leonard Stanley*, and *Alfred Ernest* **Russell**, grafting of the thymus in animals, A., ii, 842.
Dudley, *Charles Benjamin.* See *William Francis* **Hillebrand.**
Düring, *Erich*, 4-pyrophthalone, A., i, 233.
reduction products of 4′-methyl-4-stilbazole; 4-ω-trichlorohydroxypropylpyridine, A., i, 233.
Dürrschnabel, *Karl*, and *Hugo* **Weil**, action of sulphurous acid on the triphenylmethane dyes, A., i, 947.
Dumansky, *A. V.*, colloidal ferric hydroxide, A., ii, 37.
colloidal ferric hydroxide. II. Influence of ammonium chloride, A., ii, 393.
colloidal ferric hydroxide. III. Influence of various salts on the coagulation, A., ii, 714.
Dumont, *J.*, the agricultural value of humus matter, A., ii, 196.
mineralogical analysis of soils, A., ii, 485.
Duncan, *William*, ferrous and ferric arsenates, A., ii, 167.
solubility of quinine in ammonia; testing of quinine sulphate, A., ii, 427.
Dunlap, *Edward A.* See *Edward* **Mallinckrodt**, *jun.*
Dunlap, *Frederick Levy*, action of phenylsemicarbazide and semicarbazide hydrochloride on phthalic anhydride, A., i, 830.
Dunlap, *Frederick Levy*, and *William* **Seymour**, the hydrolytic enzyme, lipase, A., ii, 753.
Dunn, *John Thomas.* See *John* **Pattinson.**
Dunstan, *Albert Ernest*, the viscosity of liquid mixtures. Part II., T., 11.
Dunstan, *Wyndham Rowland*, and *Albert Edward* **Andrews**, contributions to our knowledge of the aconite alkaloids. Part XVI. Indaconitine, the alkaloid of *Aconitum chasmanthum*, T., 1620; P., 233.
contributions to our knowledge of the aconite alkaloids. Part XVII. Bikhaconitine, the alkaloid of *Aconitum spicatum*, T., 1636; P., 234.
Dunstan, *Wyndham Rowland*, and *George Stanfield* **Blake**, thorianite, a new mineral from Ceylon, A., ii, 833.
Dunstan, *Wyndham Rowland*, and *Thomas Anderson* **Henry**, contributions to our knowledge of the aconite alkaloids. Part XVIII. The aconitine group of alkaloids, T., 1650; P., 235.
Dunstan, *Wyndham Rowland*, *Hooper Albert Dickinson* **Jowett**, and *Ernest* **Goulding**, the rusting of iron, T., 1548; P., 231.
Dupont, *François*, estimation of saccharose in presence of dextrose and lævulose, A., ii, 558.
Dupré, *P. V.*, ammonium oxalate; its formula and stability, A., i, 679.
Duregger, *W.*, an oxidation product of homohydroxysalicylic acid, A., i, 702.
Durham, *Florence M.*, tyrosinase in the skins of some pigmented vertebrates, A., ii, 101.
Du Roi and **Köhler**, the "sinacid" butyrometer, A., ii, 125.
Durrant, *Reginald Graham*, green compounds of cobalt produced by oxidising agents, T., 1781; P., 251.
Dutoit, *Paul*, and *Alex.* **Levier**, limiting conductivity of certain binary electrolytes in acetone, A., ii, 625.
Duval, *Henri*, reduction of derivatives of dinitrodiphenylmethane, A., i, 651.
Dykes, *Robert*, precipitation of gold in the crystalline form, A., ii, 396.
Dziewoński, *Karl.* See *Emilio* **Noelting.**

E.

Eberhard, *G.*, spectrographical investigation of some thorium preparations, A., ii, 258.
spectrographic investigations of the Urbain-Lacombe method for the separation of samarium, europium, and gadolinium, A., ii, 587.
Eberhardt, *Ernst.* See *Otto* **Dimroth.**

Eberle, *Fritz*. See *Roland* **Scholl**.
Echtermeier, *P.*, essential oil of *Achillea nobilis*, A., i, 535.
Eckart, *Carl*, apparatus for the production of chlorine, carbon dioxide, hydrogen sulphide, &c., A., ii, 515.
Eckstein, *Oskar*, dinaphthalene oxides, A., i, 885.
Eckstein, *Oskar*. See also *Arthur* **Michael**.
Edelstein, *Anna*, and *Stanislaus von* **Kostanecki**, 4′-hydroxyflavanol, A., i, 460.
Edgar, *E. C.* See *Harold Baily* **Dixon**.
Edie, *E. S.*, action of chloroform on proteids, A., i, 397.
Edie, *E. S.* See also *Herbert E.* **Roaf**.
Edkins, *J. Sydney*, chemical mechanism of gastric secretion, A., ii, 730.
Edlefsen, *G.*, excretion of β-naphthol in the urine after the administration of small doses of naphthalene, benzonaphthol, and β-naphthol, A., ii, 470.
Edmunds, *Arthur*, effect of salts of potassium and ammonium and of bile salts on blood pressure, A., ii, 264.
Edwards, *C. W.* See *Bergen* **Davis**.
Effront, *Jean*, action of amino-acids on amylase, A., i, 107.
estimation of ammonia and amides, A., ii, 60.
estimation of ammonia and proteid-nitrogen in waters, A., ii, 68.
autofermentation of beer yeast, A., ii, 602.
Eggeling, *Hans*, and *Julius* **Meyer**, rubidium fluorides, A., ii, 707.
Ehrenberg, *Paul*, loss of nitrogen in putrefying peptone solutions; bacteriological soil investigation, A., ii, 750.
Ehrenfeld, *Richard*, benzidene salts (hydrofluoride and hydrosilicofluoride), A., i, 474.
separation of hydrofluoric and sulphuric acids, A., ii, 417.
Ehrenfreund, *Bruno*, condensation of isopropylacetaldehyde [isovaleraldehyde] with acetaldehyde, A., i, 861.
Eibner, *Alexander*, homologues of quinophthalone, A., i, 716.
α′-methyl-α-pyrophthalone, A., i, 928.
Eidmann, *Wilhelm* [*Ernst Rudolf Johannes*]. See *Alexander* **Naumann**.
Eijdman, *F. H.*, colorimetry and a colorimetric method for determining the dissociation constant of acids, A., ii, 688.
Eijk, *Cornelis van*, equilibria in the systems: $TlNO_3$—KNO_3, $TlNO_3$—$AgNO_3$, and $TlNO_3$—$NaNO_3$, A., ii, 444.
Eijken, *P. A. A. F.* See *Alexander* **Tschirch**.
Eijkman, *Johan Frederik*, synthesis of aromatic substituted homosuccinic acids by means of paraconic acids, A., i, 528.
Eijkman, *Johan Frederik*, *F.* **Bergema**, and *I. T.* **Henrard**, action of zinc chloride on acid esters of phenols. II. 2:4-Dihydroxy-1:5-diacetylbenzene, A., i, 359.
Einbeck, *Hans*. See *Robert* **Pschorr** and *Otto* **Ruff**.
Einecke, *Albert*. See *Theodor* **Pfeiffer**.
Einhorn, *Alfred*, compounds of formaldehyde with amides of monobasic acids, A., i, 344.
acyl derivatives of benzylamine, A., i, 344.
hydroxymethyl derivatives of amides, A., i, 646.
Einhorn, *Alfred*, and *Gustav* **Haas**, carbonates of salicylonitrile and of salicylaldehyde, A., i, 894.
Einhorn, *Alfred*, and *Gustav* **Schupp**, benzoylation of salicylamide, A., i, 778.
Eisner, *Fritz*. See *Otto* **Ruff**.
Ekeley, *John B.*, and *Robert J.* **Wells**, new series of dihydroquinoxalines, A., i, 613.
Ellenberger, *Ernst*. See *Theodor* **Zincke**.
Elliett, *W. B.*, and *Bernhard* **Tollens**, estimation of methylpentosan in presence of pentosans, A., ii, 210.
Ellinger, *Alexander*, constitution of the indole group in albumin. II. Synthesis of indole-3-propionic acid (Nencki's scatoleacetic acid), A., i, 827.
Ellinger, *Alexander*, and *Max* **Cohn**, secretion of the human pancreas, A., ii, 643.
Elliott, *T. R.*, action of adrenaline, A., ii, 545.
Eltschaninoff, *Eugen*. See *Petr G.* **Melikoff** and *Pavel Iw.* **Petrenko-Kritschenko**.
Elze, *Fritz*. See *Hugo von* **Soden**.
Embden, *Gustav*. See *Marco* **Amalgia** and *Richard* **Claus**.
Embley, *E. H.*, and *Charles James* **Martin**, action of chloroform on the blood-vessels of bowel and kidney, A., ii, 264.
Emich, *Friedrich*, determination of vapour densities at high temperatures. II. Vapour density of carbon dioxide at 2000°, A., ii, 441.
determination of vapour densities at high temperatures. III. Disintegration of iridium by carbon dioxide; dissociation of carbon dioxide, A., ii, 803.

Emmerich, *Wilhelm.* See *Theodor* **Zincke.**

Emmerling, *Oskar*, origin of fusel oil, A., ii, 340.

Emmert, *Bruno.* See *Julius* **Tafel.**

Emmett, *A. D.*, and *Harry Sands* **Grindley**, the presence of cotton-seed oil in lards from hogs fed on cotton-seed meal, A., ii, 427.

Emmett, *A. D.* See also *Harry Sands* **Grindley.**

Emszt, *Koloman.* See *Hugo* **Böckh.**

Endemann, *Hermann*, constitution of abietic acid, A., i, 525.

Enell, *Henrik*, estimation of phosphorus in phosphorised oil, A., ii, 763.

Engel, *Hans*, time and fermentation laws of pancreas-steapsin, A., ii, 732.

Engel, *Rodolphe* [*Charles*], fat in human milk, A., ii, 468.

Engel, *W.* See *Arnold* **Reissert.**

Engler, *P.*, and *Julius* **Meyer**, ethyl dicyanosuccinate, A., i, 631.

Enklaar, *Johannes Eliza*, action of bases on chloral hydrate, A., i, 170, 741.

Ephraim, *Fritz*, sodamide, A., ii, 317.

Eppinger, *Hans*, theory of carbamide formation, A., i, 579.

formation of allantoin in the animal body, A., ii, 336.

fate of glyoxylic acid in the animal organism, A., ii, 543.

[detection of] glyoxylic acid, A., ii, 559.

Epstein, *Friedrich.* See *Georg* **Bredig.**

Erba, *Carlo*, normal quinine hydrochloride, A., i, 151.

Erben, *Franz*, estimation of amino-acids in urine, A., ii, 124.

composition of blood in cases of tuberculosis pulmonum, carcinoma ventriculi, diabetes mellitus, saturnismus chronicus, and typhus abdominalis. Clinical method for determining the plasma conditions in the blood in erythema. Capillary pyknometer, A., ii, 741.

nephritis, A., ii, 742.

Erdmann, *Ernst* [*Immanuel*], a compound of mesityl oxide with mercuric chloride, A., i, 18.

Erdmann, *Ernst*, and *Hugo* **Erdmann**, tetraiodoethylene and di-iodoethylene, A., i, 165.

Erdmann, *Hugo*, lecture experiments [liquid ozone; solid nitrogen], A., ii, 81.

addendum to the Sixth Report of the Committee [of the German Chemical Society] for fixing atomic weights, A., ii, 308.

Erlenmeyer, [*Friedrich Gustav Carl*] *Emil, jun.*, α-amino-acids, A., i, 131.

azlactones [alkylideneoxazolones] and their transformations, A., i, 237.

conversion of allocinnamic acid into Erlenmeyer's isocinnamic acid, A., i, 285.

formation of lævulic acid and of alcohol from sugars, A., i, 408.

formation of Liebermann's isocinnamic acid by the resolution of allocinnamic acid with brucine, A., i, 646.

condensation of α-keto-acids with aldehydes by means of hydrochloric acid or sodium hydroxide, A., i, 783.

preparation of αβ- and βγ-unsaturated lactones, A., i, 785.

separation of cinnamic acid into stereoisomeric components, A., i, 892.

second stereoisomeric component of allocinnamic acid, A., i, 892.

Erlenmeyer, *Emil, jun.*, and *Emil* **Arbenz**, condensation of pyruvic acid with hippuric acid, A., i, 240.

Erlenmeyer, *Emil, jun.*, and *Alfred* **Arnold**, stereochemical studies. I. New method of separating racemic compounds, A., i, 192.

new isomerism of ethylene derivatives, A., i, 193.

Erlenmeyer, *Emil, jun.*, and *Fritz* **Bade**, synthesis of some α-amino-β-hydroxy-acids, A., i, 131.

Erlenmeyer, *Emil, jun.*, and *Adolf* **Kreutz**, formation of αβ-dihydrocinnamylidenemalonic acid and αβ-dihydrocinnamylideneacetic acid, A., i, 897.

Erlenmeyer, *Emil, jun.*, and *Otto* **Matter**, azlactones [alkylideneoxazolones] from cinnamaldehyde or cuminaldehyde and hippuric acid, A., i, 238.

Erlenmeyer, *Emil, jun.*, and *Werner* **Stadlin**, azlactones [alkylideneoxazolones] from furfuraldehyde or salicylaldehyde and hippuric acid, A., i, 238.

Erlenmeyer, *Emil, jun.*, and *Franz* **Stoop**, synthesis of serine and cystine, A., i, 119.

Erlenmeyer, *Emil, jun.*, and *Fritz* **Wittenberg**, azlactones [alkylideneoxazolones] formed in the condensation of *m*-hydroxybenzaldehyde or anisaldehyde with hippuric acid, A., i, 240.

Ernest, *Adolf.* See *Julius* **Stoklasa.**

Errera, *Giorgio*, and *E.* **Casardi**, derivatives of indanedione, A., i, 446.

Escales, [*Ernst*] *Richard*, action of azoimide on *p*-benzoquinone, A., i, 145.

Esch, *Werner*, and *Abraham* **Chwolles,** analysis of indiarubber-wares, A., ii, 362.
Eschweiler, *Wilhelm*, replacement of hydrogen atoms, attached to a nitrogen atom, by methyl groups, by means of formaldehyde, A., i, 328.
Escombe, *Fergusson*. See *Horace T.* **Brown.**
Étard, *Alexandre* [*Léon*], and *E.* **Wallée,** pyrogenetic decomposition of lac resin, A., i, 604.
Euler, (*Madame*) *Astrid*. See *Hans von* **Euler.**
Euler[-Chelpin], *Hans von*, catalases, A., i, 400.
processes of assimilation. I., A., ii, 343.
enzymatic fermentation from the point of view of chemical dynamics, A., ii, 378.
catalysis by ferments, A., ii, 693.
Euler, *Hans von*, and [*Madame*] *Astrid* **Euler,** formaldehyde and formate formation, A., i, 633.
processes of assimilation. II. Condensation products of formaldehyde, A., ii, 343.
Evans, *Nevil Norton*, chrysoberyl from Canada, A., ii, 328.
Evans, *W. H.*, electrolytic preparation of titanous sulphate, A., ii, 169.
Eve, *A. S.*, secondary radiation caused by the β- and γ-rays of radium, A., ii, 4.
properties of radium in minute quantities, A., ii, 367.
Ewbank, (*Miss*) *Elinor Katharine*. See *Edward Charles Cyril* **Baly.**
Ewins, *Arthur James*. See *George* **Barger.**
Eynon, *Lewis*. See *Raphael* **Meldola.**

F.

Fabinyi, *Rudolf*, and *Tiberius* **Széki,** condensation of catechol with ketones, A., i, 591.
condensation of pyrogallol with acetone and with methyl ethyl ketone, A., i, 888.
Fabry, *Charles*, spectra of the fluorides of the alkaline earths in the electric arc, A., ii, 217.
Fages Virgili. See **Virgili.**
Fahrion, *Wilhelm*, drying process of linseed oil, A., i, 10.
Faktor, *Franz* [*Josef*], reactions with sodium thiosulphate, A., ii, 452, 812.
some reactions with magnesium, A., ii, 455.
estimation of gold and platinum by means of magnesium, A., ii, 485.
Falk, *Franz*. See *Otto* **Kühling.**
Falk, *Milton J.* See *Henry Clapp* **Sherman.**
Falkner, *Ernest Basil*. See *Charles* **Weizmann.**
Farbenfabriken vorm. *Friedrich* **Bayer & Co.,** [alkyl ethers of *o*-tolylcarbinol], A., i, 128.
preparation of methylaminoanthraquinones, A., i, 145.
sulphonic acids of *p*-aminohydroxyanthraquinones, A., i, 146.
a new α-sulphonic acid of purpurin, A., i, 146.
α-derivatives of geraniol, A., i, 147.
2-alkyloxypyrimidine derivatives, A., i, 159.
thio-derivatives of pyrimidine, A., i, 245.
preparation of aldehydes, A., i, 355.
disulphonic acids of anthraquinone, A., i, 361.
nitro-derivatives of alkylaminoanthraquinones, A., i, 361.
methyl ethers of hydroxyanthraquinones, A., i, 362.
preparation of *m*-tolylsemicarbazide, A., i, 383, 949.
1:2:5-trihydroxyanthraquinone, A., i, 532.
dyes from quinolinium compounds, A., i, 548.
2:4-di-imino-6-hydroxy-5:5-dialkylpyrimidines, A., i, 671.
di-iminothiopyrimidine and its alkyl derivatives, A., i, 671.
[azine derivatives of anthraquinone], A., i, 720.
[1:4-dibromo-2-aminoanthraquinone], A., i, 797.
aryl ethers of anthraquinone derivatives, A., i, 797.
2-bromo-α-aminoanthraquinone, A., i, 910.
elimination of the sulpho-group from anthraquinone derivatives, A., i, 911.
compounds of azines of the anthraquinone series [with formaldehyde], A., i, 946.
Farbwerke vorm. Meister, Lucius, & Brüning, *o*-chloro-*m*-nitrotoluene-ω-sulphonic acid, A., i, 124.
aminoacetylcatechol, A., i, 127.
dialkyl ethers of anthrachrysone derivatives, A., i, 146.
p-nitrobenzeneazo-*o*-toleneneazo-β-naphthol, A., i, 162.
4:4′-diaminoformyl-(acetyl)-diphenylamine, A., i, 191.
[2:2′-diamino-4:4′-oxalotoluidide], A., i, 249.

Farbwerke vorm. Meister, Lucius, & Brüning, amino-alcohols of the formula $C_6H_3(OH)_2 \cdot CH(OH) \cdot CH_2 \cdot NX_2$, A., i, 436.
amino-derivatives of anthraquinone, A., i, 447.
indophenol derivatives from *p*-chlorophenol, A., i, 530.
sulphur dye from 2:2′-diamino-4:4′-oxalotoluidide, A., i, 540.
purification of *o*-nitrotoluene, A., i, 639.
condensation products of primary aromatic amines with formaldehyde, A., i, 643.
hydroxyanthraquinoneglycollic [anthraquinoneoxyacetic] acids and their esters, A., i, 648.
cyclogeraniolideneacetone, A., i, 653.
dinitrodiaminoanthraquinonedioxamic acids, A., i, 653.
1-hydroxyanthraquinone-5-sulphonic acid, A., i, 653.
preparation of *o*-dimethoxyanthraquinones, A., i, 654.
oxidation of aromatic hydrocarbons by means of cerium peroxide, A., i, 697.
[methoxy-derivatives of anthraquinone], A., i, 709.
[azo-dyes from β-diketones and β-ketonic esters], A., i, 723.
tetrazophenolsulphonic acid, A., i, 725.
red sulphur dyes from resorcinol, A., i, 913.
aminoazo-dyes from chlorochromotropic acid, A., i, 953.
Farmer, *J. E.*, *J. E. S.* **Moore**, and *C. E.* **Walker**, behaviour of leucocytes in malignant growths, A., ii, 845.
Farnsteiner, *K.*, and *W.* **Stüber**, composition of orange juice, A., ii, 52.
Farrington, *Oliver Cummings*, [martite from Mexico], A., ii, 398.
the Rodeo meteorite, A., ii, 726.
Faure, *J.*, 4-*p*-hydroxyphenylsalicylic acid, A., i, 350.
Fawcett, *John*, and *Arthur Edwin* **Boycott**, pseudo-lipæmia, A., ii, 49.
Faworsky, *Alexei E.*, action of potassium hydroxide on mixtures of ketones with phenylacetylene, A., i, 773.
Fawsitt, *Charles Edward*, the kinetics of chemical changes which are reversible. The decomposition of *as*-dimethylcarbamide, T., 494; P., 115.
Fecht, *Hermann*, semialdehyde of maleic acid, A., i, 407.
Feder, *E.*, influence of alkaloids on certain processes of oxidation, A., i, 150.
Feder, *E.* See also *Th.* **Schumacher**.
Federer, *Max.* See *Carl* **Neuberg**.
Feenstra, *Rudolf*. See *Alfred* **Werner**.
Feige, *A.* See *Édouard* **Urbain**.
Feigel, *H.* See *Karl A.* **Hofmann**.
Feist, *Franz*, and *Erich* **Baum**, bromo-derivatives of 4-pyrone and the stability of halogen derivatives of 2- and 4-pyrones, A., i, 914.
Feit, *Wilhelm*, terbium, A., ii, 251.
Feit, *Wilhelm*, and *Carl* **Przibylla**, monazite earths, A., ii, 250.
Feldhaus, *Julius*, quantitative investigation of the distribution of the alkaloids in the organs of *Datura Stramonium*, A., ii, 648.
Feliciani, *C.*, conductivity of nitrogen dioxide for heat, A., ii, 144.
Felipe, *Blas Cabrera*, conductivity of sulphuric acid at different temperatures, A., ii, 669.
Fellenberg, *Theodor von*. See *Herman* **Decker**.
Fendler, *Georg*, oil from the seeds of *Calophyllum Inophyllum*, A., ii, 277.
cachalot oil, A., ii, 491.
Fenton, *Henry John Horstman*, further studies on dihydroxymaleic acid, T., 804; P., 168.
attempted synthesis of uric acid, A., i, 267.
Ferguson, *William Cashman* [*Augustine*], methods employed in preparing the tables of specific gravity of sulphuric, nitric, and hydrochloric acids and ammonia, A., ii, 632.
Fernbach, *Auguste*, and *Jules* **Wolff**, diastasic coagulation of starch, A., i, 164.
analogy between starch coagulated by amylocoagulase and pea starch, A., i, 574.
influence of liquefaction of starch on its transformation by saccharifying diastases, A., i, 624.
Fernbach, *Auguste*. See also *Jules* **Wolff**.
Fernekes, *Gustave*, action of amalgams on solutions, A., ii, 33.
Fernekes, *Gustave*, and *Arthur A.* **Koch**, volumetric methods for estimating copper, A., ii, 860.
Ferrero, *Efisio*, and *M.* **Nozari**, absorption spectra of solutions of chrome alum, A., ii, 493.
Ferrulli, *Felice*. See *Gaetano* **Minunni**.
Fetzer, *K.* See *Edgar* **Wedekind**.
Feyerabend, *Reinhard*. See *Ludwig* **Claisen**.
Fieber, *Rudolf*, apparatus for testing gases, A., ii, 278.

Fierz, *Hans Eduard*. See *Martin Onslow* **Forster**.
Finckh, *Karl*, determination of chemical equilibrium from explosion processes. I., A., ii, 444.
Findlay, *Alexander*, viscosity of liquid mixtures at their boiling points, A., ii, 803.
Findlay, *Alexander*, and *Frederick Charles* **Short**, behaviour of solutions of propyl alcohol towards semi-permeable membranes, T., 819; P., 170; discussion, P., 171.
Findlay, *Alexander*, and *William Ernest Stephen* **Turner**, the influence of the hydroxyl and alkoxyl groups on the velocity of saponification. Part I., T., 747; P., 127.
Fingerling, *Gustav*, influence of stimulants on the consumption of food; digestibility and secretion of milk with non-stimulating and normal food, A., ii, 476.
Fingerling, *Gustav*. See also *August* **Morgen**.
Finzi, *F.* See *Giuseppe* **Bruni**.
Finzi, *Friedrich*, dihydroxydeoxybenzoins, A., i, 906.
Firma *Emanuel* **Merck**. See **Merck**.
Firth, *Robert Hammill*, epidemic or bacillary dysentery, A., ii, 50.
Fischer, *Arthur*, electrolytic estimation and separation of antimony and tin; the trisulphide method for estimating antimony, A., ii, 120.
Fischer, *Arthur*, and *R. J.* **Boddaert**, electrolytic deposition of the more important metals from moving solutions, A., ii, 206.
Fischer, *Emil*, 5-methylbarbituric acid, A., i, 122.
synthesis of polypeptides. XI., A., i, 688.
synthesis of polypeptides. XIII. Chlorides of amino-acids and polypeptides, and their use as synthetical agents, A., i, 863.
action of hippuryl chloride on polyhydric phenols, A., i, 892.
use of quartz vessels for lecture experiments, A., ii, 20.
Fischer, *Emil*, and *Emil* **Abderhalden**, behaviour of various polypeptides towards the pancreas ferment, A., ii, 333.
Fischer, *Emil*, and *Walter* **Axhausen**, synthesis of polypeptides. XI. Alanylglycine and leucylalanylglycine, A., i, 688.
Fischer, *Emil*, and *Arnold* **Brunner**, synthesis of polypeptides. XI. Leucylglycine and alanyl-leucylglycine, A., i, 690.
Fischer, *Emil*, and *Alfred* **Dilthey**, 5:5-dialkylbarbituric acids and the ureides of the dialkylacetic acids, A., i, 35.
Fischer, *Emil*, and *Karl* **Kautzsch**, synthesis of polypeptides. XII. Alanylalanine and its derivatives, A., i, 637.
Fischer, *Emil*, and *Wilhelm F.* **Koelker**, synthesis of polypeptides. XI. Leucylisoserine, A., i, 692.
Fischer, *Emil*, and *Ernst* **Koenigs**, synthesis of polypeptides. VIII. Chlorides and amides of aspartic acid, A., i, 31.
Fischer, *Emil*, and *Josef von* **Mering**, veronal, A., ii, 776.
Fischer, *Emil*, and *Karl* **Raske**, synthesis of polypeptides. XI. Derivatives of α-aminobutyric acid, A., i, 693.
transformation of β-vinylacrylic acid into diaminovaleric acid, A., i, 863.
Fischer, *Emil*, [with *Ferd.* **Reuter**], synthesis of polypeptides. IX. Chlorides of the amino-acids and their acyl derivatives, A., i, 263.
Fischer, *Emil*, and *Julius* **Schmidlin**, synthesis of polypeptides. XI. Dipeptides of phenylglycine with glycine, alanine, asparagine, and aspartic acid, A., i, 694.
Fischer, *Emil*, and *Umetarō* **Suzuki**, synthesis of polypeptides. VII. Derivatives of cystine, A., i, 30.
polypeptides of the diamino-acids, A., i, 121.
cystine, A., ii, 736.
Fischer, *Emil*, and *Otto* **Warburg**, synthesis of polypeptides. XI. Glycylleucine, alanyl-leucine, leucylalanine, glycylalanyl-leucine, and active alanylglycine, A., i, 690.
synthesis of polypeptides. XI. Optically active α-bromopropionic acid, A., i, 692.
Fischer, *Franz*, transition resistance and polarisation at the aluminium anode, A., ii, 6.
blue aluminium compounds deposited on the aluminium anode, A., ii, 252.
action of ultra-violet light on glass, A., ii, 320.
chemical transfer of metallic potentials and the chemical solution pressure of metals, A., ii, 501.
mercury arc lamp with quartz jacket suitable for chemical purposes, A., ii, 568.
Fischer, *Franz*, and *Fritz* **Braehmer**, formation of ozone by ultra-violet light, A., ii, 580.
Fischer, *Georg*. See *Otto* **Ruff**.
Fischer, *Herbert*. See *Walter* **Herz**.

Fischer, *Hugo*, nitrogen-fixing bacteria, A., ii, 189.
life conditions of nitrogen-fixing bacteria, A., ii, 602.
the condition of living substance, A., ii, 841.
Fischer, *Karl*, and *H.* **Peyau**, Halphen's reaction, A., ii, 213.
Fischer, *Martin H.*, production and inhibition of glycosuria in rabbits by salts, A., ii, 103, 741.
Fischer, *Martin H.*, and *Wolfgang* **Ostwald**, physico-chemical theory of fertilisation, A., ii, 329.
Fischer, [*Philipp*] *Otto*, and *Christian* **Buck**, harmine and harmaline, A., i, 229.
Fischer, *Otto*, and *Eduard* **Hepp**, action of hydroxylamine on aposafranones, A., i, 948.
Fischer, *Otto*, and *Walter* **Hess**, ketonic decomposition of the triphenylcarbinols, A., i, 205.
Fischer, *Otto*, [with *J. G.* **Mouson** and *O.* **Veiel**], benziminazoles and their decomposition, A., i, 245.
Fischer, *Theophile*, estimation of the halogens in mercury compounds, A., ii, 350.
Fischer, *Theophile*, and *H. von* **Wartenberg**, new oxyhaloids of mercury, A., ii, 456.
Fitzgerald, *Mabel Purefoy*, and *John Scott* **Haldane**, normal alveolar carbon dioxide pressure in man, A., ii, 539.
Flaecher, *F.* See *Ernst* **Schmidt**.
Flamand, *Cl.*, and *Bernhardt* **Prager**, analysis of compounds containing nitrogen in union with nitrogen by means of Kjeldahl's method, A., ii, 201.
Flaschner, *Otto*, action of benzyl chloride and *o*- and *p*-nitrobenzyl chlorides on phenylhydrazine and *p*-bromophenylhydrazine, A., i, 936.
Fleckenstein, *A.*, salt solutions in mixtures of alcohol and water, A., ii, 688.
Fleischer, *Julius*, a filter funnel for the estimation of paraffin in mineral oil distillates, A., ii, 486.
Fleming, *John Arnold*, and *Robert Abbott* **Hadfield**, magnetic qualities of some alloys not containing iron, A., ii, 799.
Fletcher, *W. M.* See *Otto* **Loewi**.
Fleurent, *Émile* [*Charles Albert*], estimation of phosphoric acid in foodstuffs, A., ii, 116.
action of various physical and chemical agents on the gluten of wheat flour; estimation of gluten, A., ii, 215.
Flexner, *Simon*, and *Hideyo* **Noguchi**, plurality of cytolysins in snake venom, A., ii, 107.
Flora, *Charles P.*, use of the rotating cathode for the estimation of cadmium taken as the sulphate, A., ii, 859.
Floris, *Robert Brooke*. See *George* **McGowan**.
Flürscheim, *Bernhard*, laws of substitution in aromatic compounds, A., i, 614.
Foerster, *Fritz*, and *Erich* **Müller**, electrolytic formation of chlorates, A., ii, 697.
Foerster, *Fritz*, and *Alfred* **Piguet**, electrolysis of potassium acetate, A., i, 111.
Foerster, *Fritz*. See also *Giulio* **Coffetti**.
Folin, *Otto*, normal urine, A., ii, 183.
a theory of protein-metabolism, A., ii, 268.
Folin, *Otto*. See also *Carl Luca* **Alsberg**.
Foote, *Harry Ward*, and *I. A.* **Andrew**, acid oxalates of lithium, sodium, potassium, and cæsium and their solubility, A., i, 679.
certain alleged double oxalates, A., i, 679.
Forbes, *George S.* See *Theodore William* **Richards**.
Forch, *Carl* [*Friedrich Otto Hugo*], surface tension of inorganic salt solutions, A., ii, 681.
Forcrand, *Robert* [*Hippolyte*] *de*, possibility of chemical reaction, A., ii, 15.
prediction of chemical reactions, A., ii, 15.
valency of hydrogen, A., ii, 310.
heat of formation of sodium hydride; acidity of the hydrogen molecule, A., ii, 372.
some properties of the hydrides of the metalloids of the first three families, A., ii, 696.
Ford, *John Simpson*, and *John Monteath* **Guthrie**, the influence of certain amphoteric electrolytes on amylolytic action, P., 296.
malt analysis. II. Estimation of moisture and extract, A., ii, 564.
Formánek, *Emanuel*, action of formaldehyde on pyridine, A., i, 374.
Formánek, *Julius*, relations existing between constitution and absorption spectra of the thiazines and thiazones, A., ii, 217.
Forst, *Peter von der*. See *Hermann* **Grossmann**.
Forster, *Martin Onslow*, studies in the camphane series. Part XVII. Configuration of isonitrosocamphor and its unstable modification, T., 232; P., 22.

Forster, *Martin Onslow*, and *Hans Eduard* **Fierz**, studies in the camphane series. Part XVI. Camphorylcarbimide and isomeric camphorylcarbamides, T., 110; P., 21.
studies in the camphane series. Part XIX. Camphoryl-ψ-semicarbazide, T., 722; P., 151; discussion, P., 151.
studies in the camphane series. Part XX. Camphorylazoimide, T., 826; P., 178.

Forster, *Martin Onslow*, and (*Miss*) *Hilda Mary* **Judd**, studies in the camphane series. Part XVIII. A new formation of acetylcamphor, T., 368; P., 116.

Fosse, *Robert*, and *L.* **Lesage**, basicity of pyranic oxygen; halogen double salts of metals and dinaphthapyryl, A., i, 541.
basicity of pyranic oxygen; double salts of halogen derivatives of dinaphthapyryl and of the metals, A., i, 917.

Fosse, *Robert*, and *A.* **Robyn**, pyranic [xanthyl] phenols, A., i, 607.

Foster, *G. W. A.*, action of the silent discharge on chlorine, A., ii, 449.

Fourneau, *Ernest*, amino-alcohols; synthetic ephedrines, A., i, 57.

Fourneau, *Ernest*, and *Marc* **Tiffeneau**, aromatic mono-substituted ethylene oxides, A., i, 591.

Fox, *John Jacob*. See *John Theodore* **Hewitt**.

Fraenckel, *Paul*, concentration of hydrogen ions in pure gastric juice, and its relation to electrical conductivity and acidity; the influence of the alkaline earths on the reaction of animal fluids, A., ii, 403.

Fränkel, *Leiba*. See *Carl Adam* **Bischoff**.

Fraenkel, *W.* See *Georg* **Bredig**.

Franchimont, *Antoine Paul Nicolas*, and *H.* **Friedmann**, 2:6-tetramethylpiperidine, A., i, 80.

Francis, *Francis Ernest*, the action of nitrogen sulphide on organic substances. Part IV., T., 1836; P., 258.
the preparation and reactions of benzoyl nitrate, P., 302.

François, *Maurice*, pyridine mercuriiodides, A., i, 373.
iodomercurates and chloroiodomercurate of monomethylamine, A., i, 574.

Frank, *Fritz*, and *Eduard* **Marckwald**, guttapercha-like substance from the resin of the karite tree, A., i, 293.

Frank, *Otto*, and *Adolf* **Ritter**, action of the mucous membrane of the surviving intestine on soaps, fats, and fatty acids, A., ii, 733.

Frank, *Paul*. See *Arthur* **Rosenheim**.

Frank, *Robert T.*, electric conductivity of blood during coagulation, A., ii, 835.

Franke. See *Friedrich Wilhelm* **Küster**.

Franke, *Adolf* [*Emil*], and *Moritz* **Kohn**, action of organomagnesium compounds on β-hydroxy-aldehydes and on keto-alcohols, A., i, 111.

Frankforter, *George Bell*, and *Francis C.* **Frary**, new forms of lecture and laboratory apparatus, A., ii, 514.

Frankforter, *George Bell*, and *Max* **Lando**, eugenol and certain of its derivatives, A., i, 592.

Frankforter, *George Bell*, and *Rodney* **West**, gasometric estimation of formaldehyde, A., ii, 619.

Frankland, (*Sir*) *Edward*, obituary notice of, T., 574.

Frankland, *Percy Faraday*, and *Edward* **Done**, the resolution of inactive glyceric acid by fermentation and by brucine, T., 618; P., 132.

Frankland, *Percy Faraday*, and *Norman Leslie* **Gebhard**, the ethereal salts and amide of dimethoxypropionic acid derived from *d*-glyceric acid, T., 864; P., 189.

Franklin, *Edward Curtis*, reactions in liquid ammonia, A., ii, 581.

Franklin, *Edward Curtis*, and *Charles August* **Kraus**, electrical conductivity of liquid ammonia solutions. II., A., ii, 298.

Franz, *A.* See *Adolf* **Pinner**.

Franzen, *Hartwig*, replacement of the hydroxyl group by the hydrazine group, A., i, 244.
reduction of oximes and hydrazones with zinc dust and glacial acetic acid, A., i, 427.
reduction of hydrazones in acid solution, A., i, 830.

Franzen, *Hartwig*, and *W.* **Deibel**, reducing action of organo-magnesium compounds, A., i, 843.

Fraps, *George Stronach*, estimation of sulphates in vegetable products, A., ii, 59.
assimilation of free nitrogen by Bacteria, A., ii, 110.
studies on nitrification, A., ii, 110.
composition of rice refuse, A., ii, 114.

Fraps, *George Stronach*. See also *W. A.* **Withers**.

Frary, *Francis C.* See *George Bell* **Frankforter**.

Fraschina, *Carlo*. See *Isaak* **Berstein**.
Frassetti, *P.*, ethylene xanthate and ethylene thiocarbonate, A., i, 256.
Frazer, *Joseph Christie Whitney*. See *Harmon Northrup* **Morse**.
Frébault, *Aristide*, reduction of benzonitrile and *p*-toluonitrile, A., i, 437.
Frébault, *Aristide*. See also *Jules* **Aloy**.
Fredenhagen, *Carl*, foundations of a general theory of the electrolytic solution tensions of substances in any solvent, A., ii, 686.
Frémont, *Ch.* See *Floris* **Osmond**.
Frentzel, *L.* See *Fritz* **Ullmann**.
Frerichs, *Gustav*, detection of nitric acid by the diphenylamine reaction, A., ii, 282.
Frerichs, *Heinrich*, volumetric estimation of iodine, A., ii, 281.
Frerichs, *Heinrich*, and *G.* **Rodenberg**, electrolytic estimation of small quantities of arsenic, A., ii, 651.
Fresenius. See *Conrad von* **Seelhorst**.
Fresenius, *Wilhelm*, statement of analytical results, A., ii, 197.
Fresenius, *Wilhelm*, and *Leo* **Grünhut**, commercial analysis of formaldehyde, A., ii, 211.
quantitative analysis of some new surgical dressings, A., ii, 211.
Freudenreich, *Ed. von*, and *Johannes* **Thöni**, action of different lactic ferments on cheese ripening, A., ii, 189.
Freund, *Martin*, thebaine, A., i, 918.
Freund, *Martin*, and *Heinrich* **Beck**, a new series of bases derived from dihydroberberine, A., i, 151.
action of magnesium benzyl chloride on crystal-violet, A., i, 159.
Freund, *Martin*, and *Gustav* **Lebach**, indole colouring matters, A., i, 663.
Freund, *Martin*, and *Fritz* **Mayer**, α-methyltetrahydroberberine, A., i, 657.
Freund, *Martin*, [with *Edmund* **Speyer**], a method for the preparation of compounds derived from pseudo-bases by the replacement of the hydroxyl group by hydrocarbon residues, A., i, 156.
Freundler, *Paul* [*Théodore*], azodiphenylmethane: a correction, A., i, 162.
bromination of paraldehyde, A., i, 569.
Freundler, *Paul*, and *E.* **Damond**, some derivatives of cyclohexane, A., i, 890.
Freundler, *Paul*, and **Ledru**, bromoacetal, A., i, 326.
Frevert, *Harry Louis*. See *Gregory Paul* **Baxter**.
Frey, *Ernst*, gout, A., ii, 742.
Freyssinge, *L.*, and *Raoul* **Roche**, purification and sterilisation of drinking water by means of calcium peroxide, A., ii, 515.
Fribourg, *Ch.* See *Henri* **Pellet**.
Friedel, *Jean*, chlorophyllic assimilation in absence of oxygen, A., ii, 191.
Friedenthal, *Hans*, acidimetry of animal liquids, A., ii, 213.
Friederichs, *Wilhelm*, absorption spectra of vapours, A., ii, 782.
Friedheim, *Carl*, so-called solid solutions of indifferent gases in uranium oxides, A., ii, 530.
Friedheim, *Carl*, *O.* **Decker**, and *E.* **Diem**, separation of arsenic from vanadium and molybdenum, A., ii, 764.
Friedheim, *Carl*, and *Peter* **Hasenclever**, use of hydroxylamine in quantitative analysis [separation of metals], A., ii, 766.
Friedheim, *Carl*, *William Hope* **Henderson**, and *Alfred* **Pinagel**, separation of tungsten trioxide and silicon dioxide by means of hydrogen chloride and the analysis of silicotungstates, A., ii, 614.
Friedheim, *Carl*, and *Ludwig* **Jacobius**, separation of metals by volatilisation in a current of hydrogen chloride, A., ii, 652.
Friedheim, *Carl*, and *Alfred* **Pinagel**, supposed volatility of silicon dioxide at the moment of its liberation by strong acids, A., ii, 584.
Friedländer, *Conrad*, 4-stilbazole, A., i, 232.
4-stilbazole and 3′-nitro-4-stilbazole, A., i, 818.
action of 5-methylacridine on benzaldehyde and *m*-nitrobenzaldehyde, A., i, 829.
Friedländer, *Paul*, and *Ferdinand* **Mauthner**, sulphur dyes, A., i, 102.
Friedmann, *H.* See *Antoine Paul Nicolas* **Franchimont**.
Friedrichs. See **Greiner**.
Friend, *John Albert Newton*, estimation of potassium permanganate in the presence of potassium persulphate, T., 738; P., 133.
estimation of hydrogen peroxide in the presence of potassium persulphate, T., 1367; P., 185.
Frisbie, *W. S.* See *George Henry Alexander* **Clowes**.
Frischmuth, *Paul*. See *Conrad* **Willgerodt**.
Frisell, *Gunnar*. See *Hans* **Rupe**.
Friswell, *Richard John*, an improved Kipp's apparatus, A., ii, 20.
Fritsch, *Rodolfo*. See *Eduard* **Lippmann**.

Fritzsche, *W.* See *Otto* **Wallach**.
Fröhlich, *Alfred*, the Munchi arrow poison, A., ii, 411.
Fröhlich, *Emanuel.* See *Edgar* **Wedekind**.
Fröhlich, *Emil.* See *Carl Adam* **Bischoff**.
Froehner, *A.*, analysis of wine vinegar, A., ii, 360.
Fromme, *Albert*, a fat-hydrolysing ferment from the mucous membrane of the stomach, A., ii, 731.
Frommel, *Wilhelm.* See *Wilhelm* **Steinkopf**.
Frossard, *Jos.* See *Luc.* **Baumann**.
Fuchs, *Charles.* See *Paul Thiébaud* **Muller**.
Fuchs, *Willy.* See *Leopold* **Nathan**.
Führer, *Hermann*, thalleioquinine reaction of quinine and Jaffé's kynurenic acid reaction, A., i, 828.
the action of alcohols on echinoderm eggs, A., ii, 49.
Fürth, *Otto von*, oxidation of albumins, A., i, 497.
Funaro, *Angiolo*, and *I.* **Barboni**, lecithin in wine, A., ii, 275.
Funk, *Casimir*, and *Stanislaus von* **Kostanecki**, 2-methoxystilbene, A., i, 352.

G.

Gabriel, *Siegmund*, phthalonimide and *o*-phenylenediamine, A., i, 97.
amino-derivatives of pyrimidine, A., i, 244.
aminoacetone, A., i, 265.
isocysteine and isocystine, A., i, 265.
γ-nitropropylphthalimide, A., i, 441.
bromodihydrouracil, A., i, 481.
derivatives of β-aminoethyl and of α-aminopropyl alcohols, A., i, 649.
nitroso-derivatives of oxygenated imino-compounds, A., i, 650.
diaminoethyl ether, A., i, 862.
Gabriel, *Siegmund*, and *James* **Colman**, quinazoline. III., A., i, 944.
Gabritschewski, *V.*, electrical radiography, A., ii, 218.
Gadais, *L.*, and *J.* **Gadais**, detection and estimation of lead in cream of tartar, A., ii, 357.
Gadamer, *Johannes* [*Georg*], action of amyl alcohol on chloral ethyl-alcoholate, A., i, 326.
constitution of ψ-ammonium bases with reference to the alkaloids and the products these yield by transformation, A., i, 368.
berberine, A., i, 369.
Gadamer, *Johannes* [*Georg*], condensation of ψ-ammonium bases with hydroxylamine and *p*-dimethylaminoaniline, A., i, 383.
Corydalis alkaloids, A., i, 462; ii, 411.
Gademann, *Ferdinand.* See *Hans* **Stobbe**.
Gadomska, *Stephani.* See *Herman* **Decker**.
Gärtner, *Richard.* See *Ludwig* **Claisen**.
Gärtner, *Simon*, chloralamino-compounds. II., A., i, 130.
Gage, *Stephen de M.*, contribution to the biochemistry of sewage purification; the bacteriolysis of peptones and nitrates, A., ii, 474.
Gahl, *Willi.* See *Wilhelm* **Biltz**.
Gahrtz, *G.* See *Walther* **Borsche**.
Gaillard, *Gaston*, time interval before precipitation is observed in thiosulphate solutions, A., ii, 241.
Galeotti, *Gino*, equilibrium between proteids and electrolytes. I. Equilibrium in the system, egg-albumin, ammonium sulphate, and water, A., ii, 512.
Gallo, *Gino*, electrochemical equivalent of tellurium, A., ii, 242.
Ganassini, *Domenico*, toxicological detection of hydrocyanic acid, A., ii, 867.
Ganghofer, *August.* See *Carl* **Bülow**.
Gañguli, *Atul Chandra.* See *Prafulla Chandra* **Rây**.
Gans, *J.* See *Ludwig* **Vanino**.
Gardner, *John Addyman*, the bromo-derivatives of camphopyric acid, T., 1516; P., 230.
Garner, *James Bert.*, certain reactions of benzoin, A., i, 143.
Garnett, *J. C. Maxwell*, colours in metal glasses, in metallic films, and in metallic solutions. II., A., ii, 783.
Garrey, *Walter E.*, twitchings of skeletal muscles produced by salt solutions, A., ii, 334.
Gaudechon. See *Marcellin* **Berthelot**.
Gaunt, *Rufus*, estimation of alcohol in aqueous solutions by the freezing point, A., ii, 288.
Gautié, *Albert*, estimation of *Bacillus coli* in potable waters, A., ii, 660.
Gawalowski, *A.*, elaidin and elaidic acid, A., i, 318.
nicotine camphorate, A., i, 371.
inadmissibility of soap for estimating hardness of ferruginous water, A., ii, 68.
behaviour of hydrofluosilicic acid with various reagents, A., ii, 387.
"aluminium carbonicum," A., ii, 713.

Gaze, *Rudolf*, urea, A., ii, 277.
Gebhard, *Norman Leslie*. See *Percy Faraday* **Frankland**.
Gedel, *L.*, iron sulphides and the purification of coal gas from hydrogen sulphide, A., ii, 714.
Gee, *W. W. Haldane*, use of balanced electrodes, A., ii, 670.
Geerligs, *H. C. Prinsen*, green colour of kajeput oil, A., i, 223.
influence of sodium salts in the soil on the composition of sugar-cane, A., ii, 346.
Geest, *J.*, magnetic double refraction of sodium vapour, A., ii, 621.
Geffcken, *Gustav*, solubility of lithium carbonate in solutions of salts of the alkali metals, A., ii, 247.
Geibel, *W.* See *Friedrich Wilhelm* **Küster**.
Geisel, *Emil*. See *Otto* **Ruff**.
Gelmo, *P.*, and *Wilhelm* **Suida**, process of dyeing animal textile fibres, A., i, 714.
Gelstharp, *F.*, electrolytic recovery of tin, A., ii, 168.
Gentsch, *Curt*, crystalline double compounds of phenols with alkali phenoxides, A., i, 341.
Georgievics, *Georg* [*Cornelius Theodor*] *von*, ketonic fission of carbinols, A., i, 357.
connection between the constitution and the colour and dyeing power with mordants of the hydroxyanthraquinones and their sulphonic acids, A., i, 447.
Gerasimoff, *Dmitrij G.*, affinity of alkali oxides towards various anhydrides, A., ii, 85.
Gerb, *Ludwig*, compounds of tervalent cobalt with ethylenediamine, A., i, 328.
Gerlach, *Max*, and *Ignaz* **Vogel**, ammoniacal nitrogen as plant food, A., ii, 346.
Gernez, *Désiré* [*Jean Baptiste*], the light emitted by crystals of arsenious oxide, A., ii, 365.
triboluminescence of potassium sulphate, A., ii, 430.
triboluminescence of metallic compounds, A., ii, 431.
Gerngross, *Otto*, 5-methylpyrimidine, A., i, 942.
a synthesis of thymine, A., i, 943.
Gibbs, *Harry Drake*, boiling points of ammonia, methylamine, methyl chloride, and sulphur dioxide, A., ii, 570.
Gibson, *James A.* See *Hans H.* **Pringsheim**.
Gies, *William John*, cage for metabolism experiments, A., ii, 839.
Gies, *William John*. See also *Gustave M.* **Meyer** and *E. R.* **Posner**.
Giesecke, *E.* See *Walter* **Cronheim**.
Giesel, *Friedrich Oscar*, occurrence of radium and of radioactive noble earths in Fango mud and soil from Capri, A., ii, 132.
emanium, A., ii, 220.
simple recognition of helium from radium bromide, A., ii, 496.
"thorium activity" of monazite, A., ii, 498.
Gilchrist, *Lachlan*, electrolysis of acid solutions of aniline, A., i, 45.
Giles, *William Brantingham*, estimation and separation of thoria from the oxides of the yttrium-cerium group, A., ii, 615.
Gin, *Gustav*, preparation of iron phosphide from calcium phosphate, A., ii, 92.
Giolitti, *Federico*, dilatometric measurements of tautomeric substances, A., ii, 12.
normal basicity of alkali periodates, A., ii, 311.
conditions of stability of certain suspensions, A., ii, 823.
properties of ammonium uranate, A., ii, 861.
Giolitti, *Federico*, and *Giovanni* **Agamennone**, oxyfluoride of uranium, A., ii, 255.
Giolitti, *Federico*, and *G.* **Bucci**, equilibrium phenomena with the hydrates of uranous sulphate. II. Octahydrate and tetrahydrate of uranous sulphate, A., ii, 827.
equilibrium phenomena with the hydrates of uranous sulphate. I. Properties of uranous sulphate, A., ii, 827.
Giolitti, *Federico*, and *V.* **Vecchiarelli**, double carbonate of uranyl and ammonium, A., ii, 826.
Giran, *Henri*, combustion of sulphur in the calorimetric bomb, A., ii, 76, 505.
Girard, *Charles*, and *E.* **Rousseaux**, fertilising principles required by the tobacco plant, A., ii, 345.
Girard, *Max*. See *Herman* **Decker**.
Givaudan, *Léon*. See *Rudolf* **Barge**.
Gladstone, *John Hall*, obituary notice of, T., 591.
Glasmann, *Boris*, reduction of molybdenum compounds in sulphuric acid solution by magnesium, A., ii, 168.
combined oxidimetric method for the estimation of molybdenum trioxide and vanadium pentoxide in presence of one another, A., ii, 208.

Glasmann, *Boris*, new iodometric estimation of alkali heptamolybdates, A., ii, 209.
Glatzel, *Emanuel*, normal sodium thiophosphate, containing water of crystallisation, A., ii, 318.
Glimm, *E.*, estimation of nitrogen in barley, A., ii, 201.
Gnehm, *Robert*, benzylethylaniline, A., i, 273.
Gnehm, *Robert*, and *Leo* **Bauer**, oxazones, A., i, 831.
Gnehm, *Robert*, and *Felix* **Kaufler**, estimation of methyl alcohol in formaldehyde, A., ii, 209.
Gnehm, *Robert, jun.* See *Carl* **Graebe**.
Gnesotto, *T.*, and *G.* **Crestani**, specific rotatory power of nicotine dissolved in mixtures of water and ethyl alcohol, A., ii, 130.
Godchot, *Marcel*, oxidation products of octahydroanthracene, A., i, 201.
Godchot, *Marcel*. See also *Émile* **Jungfleisch**.
Godefroy, *L.* See *Eugène* **Varenne**.
Godlewski, *T.*, actinium and its successive products, A., ii, 497.
some radioactive properties of uranium, A., ii, 498.
absorption of the β- and γ-rays of actinium, A., ii, 666.
Godlewsky, *J. O.*, cyclene bromide (solid pinene bromide), A., i, 654.
Goebel, *J. B.*, more exact equation of condition for gases. III., A., ii, 149.
modification of van't Hoff's theory of the depression of the freezing point, A., ii, 679.
Gössel, *Fr.*, importance of calcium and magnesium salts for plants, A., ii, 51.
Goetzl, *Alberto*, estimation of sulphur in liquid fuel and in petroleum, A., ii, 761.
Goguelia, *G.* See *H.* **Cantoni**.
Goldberg, *Irma*, a new preparation of alphylthiosalicylic acids, A., i, 59.
Goldmann, *H.*, *J.* **Hepter**, and *Leon* **Marchlewski**, colouring matter of blood. V., A., i, 725.
Goldmann, *H.*, and *Leon* **Marchlewski**, colouring matter of blood. IV., A., i, 399.
Goldmann, *Reszö*. See *Iwan* **Koppel**.
Goldschmidt, *Carl*, estimation of formaldehyde, A., ii, 867.
Goldschmidt, *E.* See *Ernst* **Cohen**.
Goldschmidt, *Heinrich*, desmotropic compounds, A., i, 249.
phenylcarbimide as a reagent for determining the constitution of tautomeric compounds, A., i, 340.
Goldschmidt, *Heinrich*, hydrolysis of esters in heterogeneous systems, A., ii, 578.
kinetic study of organic reactions, A., ii, 691.
Goldschmidt, *Heinrich*, and *Oscar* **Löw-Beer**, hydroxyazo-compounds, A., i, 389.
Goldschmiedt, *Guido*, products of the condensation of *o*-aldehydocarboxylic acids, A., i, 527.
ellagic acid, A., i, 900.
Goldschmiedt, *Guido*, and *Alfred* **Lipschitz**, isomeric esters of *o*-keto-acids, A., i, 132.
Goldthwait, *J. E.*, *C. F.* **Painter**, *R. B.* **Osgood**, and *Francis H.* **McCrudden**, metabolism in osteomalacia, A., ii, 845.
Goleff, *F.* See *Wladimir G.* **Schaposchnikoff**.
Goll, *Georg.* See *Arnold* **Reissert**.
Golubeff, *P.*, crystalline products of the ethereal oil of the Siberian fir, A., i, 74.
Gomberg, *Moses*, and *Lee Holt* **Cone**, triphenylmethyl. XI. and XII., A. i, 426, 641.
Gomberg, *Moses*. See also *Nelson Elbridge* **Tousley**.
Gonder, *K. L.* See *Karl A.* **Hofmann**.
Gooch, *Frank Austin*, handling of precipitates for solution and reprecipitation, A., ii, 608.
Goodall, *Alexander*, and *Diarmid* **Noël Paton**, digestive leucocytosis. II. The source of the leucocytes, A., ii, 742.
Goodall, *Alexander*. See also *George Lovell* **Gulland**.
Goodwin, *William*, and *William Henry* **Perkin**, *jun.*, the reduction of isophthalic acid. Part II., T., 841; P., 187.
Gordan, *P.*, is hydrogen peroxide suitable for sterilising milk? A., ii, 108.
Gordin, *Harry Mann*, crystalline alkaloid of *Calycanthus glaucus*, A., i, 295.
Gore, *Herbert C.* See *Willard Dell* **Bigelow**.
Gorhan, *Adolf*, condensation of *n*-butaldehyde by means of dilute sulphuric acid, A., i, 171.
Gorni, *Felice*, detection of salicylic acid in foods, A., ii, 658.
Gortner, *Ross A.* See *Frederick Jacob* **Alway**.
Goske, *Adolf*, the turmeric reaction for boric acid, A., ii, 764.
Goslings, *N.*, hydrogen sulphide microbes in mineral waters, A., ii, 108.
Gottlieb, *B. N.*, estimation of sulphur in roasted pyrites, A., ii, 552.

Gottrau, *H. de.* See *Friedrich* **Kehrmann.**
Goulding, *Ernest.* See *Wyndham Rowland* **Dunstan.**
Graaff, *W. C. de*, formation of lactosazone, A., ii, 559.
diphenylhydrazine as a reagent for lactose, A., ii, 866.
Graebe, *Carl*, conversion of nitronaphthalenes into nitroso-derivatives of naphthol, A., i, 54.
derivatives of chrysene, A., i, 82.
alizarin dimethyl ether, A., i, 219.
esterification by means of methyl sulphate, A., i, 678.
formation of aromatic methoxy-acids and of anisole, A., i, 699.
naphthoylbenzoic acids, A., i, 704.
Graebe, *Carl*, and *Robert* **Gnehm**, *jun.*, chrysodiphenic acid [2-phenylnaphthalene-1:2′-dicarboxylic acid], A., i, 60.
Graebe, *Carl*, and *Hans* **Hess**, pyrogallol 1:3-dimethyl ether and 2:6-dimethoxybenzoquinone, A., i, 698.
Graebe, *Carl*, and *Ernst* **Martz**, methyl ethers of quinolcarboxylic, protocatechuic, and gallic acids, A., i, 702.
Graebe, *Carl*, and *Adam* **Oser**, 5:4- and 8:4-nitronitroso-α-naphthols, A., i, 54.
Graebe, *Carl*, and *Walter* **Peter**, tetrachloro- and dichloro-naphthoylbenzoic acids, A., i, 704.
Graebe, *Carl*, and *Moritz* **Suter**, transformation of trimethylgallic acid and trimethylpyrogallolcarboxylic acid into derivatives of pyrogallol trimethyl ether, antiarol, and hexamethoxydiphenyl, A., i, 703.
Graf, *Wilhelm.* See *Arthur* **Hantzsch.**
Grafe, *Viktor*, lignin, A., i, 22.
Graham, *J. C.*, diffusion of salts in solution, A., ii, 147.
Graham, *R. P. D.*, the properties of the crystals of trans-bromocamphopyric acid and of bromocamphopyric anhydride, T., 1525.
Granderye, *Léon Maurice.* See *Alfred* **Guyot.**
Granger, *Albert* [*Alexandre*], properties of tungsten trioxide as a ceramic colouring matter, A., ii, 325.
Grassi, *Ugo*, diffusion of one electrolyte in presence of another with a common ion, A., ii, 8.
increase of the conductivity of water by radium emanations, A., ii, 793.
Graton, *Louis Caryl*, and *Waldemar T.* **Schaller**, purpurite, a new mineral, A., ii, 724.
Gray, *George*, retrogression of soluble phosphates in mixed manures, A., ii, 855.
Gray, *Robert Whytlaw*, the atomic weight of nitrogen, T., 1601; P., 156.
Gray, *Thomas*, high temperature measurements, A., ii, 141.
Green, *Arthur George*, constitution of cellulose. II., A., i, 22.
Gregory, *A. W.*, quick method for the valuation of fluorspar, A., ii, 856.
Greinacher, *Heinrich*, decay of the radioactivity of radiotellurium, A., ii, 623.
Greinacher, *Heinrich.* See also *Willy* **Marckwald.**
Greiner and **Friedrichs**, new automatic pipettes, A., ii, 349.
Greshoff, *Maurits*, amount of hydrogen cyanide in the seeds of *Gynocardia odorata*, A., ii, 276.
Grewe, *Adolf.* See *Eberhard* **Rimbach.**
Griffin, *Roger Castle.* See *Gregory Paul* **Baxter.**
Griffiths, *Arthur Bower*, composition of certain invertebrate pigments, A., i, 293.
chemistry of invertebrate muscle, A., ii, 335.
Griffon, *Ed.*, chlorophyllous assimilation in young shoots of plants; application to the vine, A., ii, 475.
Grignard, *Victor*, synthesis of monohydric and polyhydric alcohols, A., i, 593.
Grigoréeff, *Alexei V.*, destruction of organic matters in toxicological investigations, A., ii, 354.
Grimal, *Émilien*, essential oil of the wood of *Thuya articulata* of Algeria, A., i, 148.
Grimbert, *Léon* [*Louis*], urinary indoxyl, A., ii, 48.
Grimsehl, [*Carl*] *Ernst* [*Heinrich*], new apparatus for the determination of vapour density, A., ii, 442.
two manometers of great sensitiveness for small pressures, and a gas balance, A., ii, 809.
Grindley, *Harry Sands*, and *A. D.* **Emmett**, chemistry of flesh. II., A., ii, 542.
Grindley, *Harry Sands.* See also *A. D.* **Emmett.**
Gröger, *Maximilian*, manganese chromates, A., ii, 392.
estimation of manganese in the presence of chromium, A., ii, 766.
Grombach, *Ad.* See *Hugo* **Kauffmann.**
Gross, *Theodor*, decomposition of silicon, A., ii, 816.
Grosser, *Paul*, indole and scatole in the organism, A., ii, 470.
Grosser, *Paul.* See also *Carl* **Neuberg.**

Grossmann, *Hermann*, action of inorganic compounds on optically active polyhydric alcohols and acids, A., i, 415.
action of lead and bismuth salts on the rotatory power of sugars, polyhydric alcohols, and hydroxy-acids. II., A., i, 861.
formation of complex compounds with mercury thiocyanate, A., ii, 249.
evaluation of sodium peroxide, A., ii, 284.
separation of thorium from the cerite earths by means of normal sodium sulphite, A., ii, 326.
Grossmann, *Hermann*, and *Peter von der* **Forst**, copper double cyanides, A., i, 179.
Grossmann, *Hermann*. See also *Georg* **Lunge**.
Grossmann, *Jacob*, preparation of alkali nitrites, A., ii, 819.
Grossmann, *Joseph*, peptic digestion products of plasteins, A., ii, 99.
the relationship of the peptic digestion products of plasteins to liver, muscles, and other organs. II., A., ii, 838.
Grossmann's Cyanide Patents Syndicate, preparation of cyanides from ferrocyanides, A., i, 123.
Grout, *Frank F.*, plasticity of clays, A., ii, 713.
Grube, *Georg*, alloys of magnesium and lead, A., ii, 320.
magnesium aluminium alloys, A., ii, 523.
alloys of magnesium with tin and thallium, A., ii, 636.
Grube, *Karl*, glycogen, A., ii, 334.
Grün, *Adolf*, synthesis of fats, A., i, 562.
Grün, *Adolf*. See also *Alfred* **Werner**.
Grünhut, *Leo*. See *Wilhelm* **Fresenius**.
Grüters, *Max*. See *Friedrich Wilhelm* **Küster**.
Grützner, *Paul* [*Friedrich Ferdinand*], gastric digestion, A., ii, 269.
Grützner, *Paul*, and *Hans* **Breyer**, action of monatomic alcohols on simple organs, A., ii, 105.
Gryns, *G.*, Koeppe's hypothesis of the nature of the red blood corpuscles, A., ii, 729.
Guareschi, *Icilio*, [and, in part, with *Adalberto* **Pasquali**, *Galeazzo* **Piccinini**, *Giovanni* **Issoglio**, and *Enrico* **Quenda**], synthesis of pyridine compounds from β-keto-esters and ethyl cyanoacetate in presence of ammonia or amines. II., A., i, 821.
Guédras, *Marcel P. S.*, esterification of glycerol, A., i, 404.
calcium carbide as an explosive in mining operations, A., ii, 87.
Guende, (*Mlle.*) *Bl.* See *Alexandre* **Desgrez**.
Guenther, *A. E.*, action of salts on skeletal and heart muscle, A., ii, 545.
Guérin, *F. Gabriel*, colour reactions for alcohols (excepting methyl and ethyl) and for compounds of alcoholic function or hydroxylic compounds, A., ii, 209.
Guertler, *W.*, and *Gustav* **Tammann**, alloys of cobalt and nickel, A., ii, 92.
alloys of nickel and of cobalt with iron, A., ii, 528.
Guidi, *G. B.* See *E.* **Baroni**.
Guignard, *L.*, compound which yields hydrogen cyanide in *Sambucus nigra*, A., ii, 604.
existence in red-currants of a compound yielding hydrogen cyanide, A., ii, 752.
Guignard, *L.*, and *Jules* **Houdas**, nature of the cyanogenetic glucoside of the elder, A., ii, 648.
Guignes, *P.*, scammony resins, A., i, 803.
quinine salts and ammonium salts, A., i, 811.
Guillemard, *H.*, action of aniline on ethylcarbylamine dibromide, A., i, 518.
Guillemard, *H.*, and *P.* **Vranceano**, toxicity of urinary alkaloids, A., ii, 470.
Guillet, *Léon*, tempering of bronzes, A., ii, 168.
constitution and properties of aluminium steels, A., ii, 526.
constitution and properties of tin, titanium, and cobalt steels, A., ii, 527.
properties, analysis, and classification of ternary steels, A., ii, 590.
alloys of copper and aluminium, A., ii, 712.
Guinchant, *Joseph*, luminescence of arsenious oxide, A., ii, 366.
triboluminescence of arsenious oxide, A., ii, 366.
Gulewitsch, *Wladimir von*, and *R.* **Krimberg**, substances extracted from muscle. II. Carnitine, A., i, 726.
Gulland, *George Lovell*, and *Alexander* **Goodall**, pernicious anæmia, A., ii, 102.
Gullbring, *Alf.*, the taurocholeic acid of ox bile, A., ii, 737.
Gumpert, *E.*, assimilation of nitrogen, phosphorus, calcium, and magnesium in man, A., ii, 840.

Gumperz, *Alfred*. See *Ivan* **Koppel** and *Richard Josef* **Meyer**.

Gundry, *Philip George*, mean potential at electrodes under the action of alternating currents, A., ii, 668.

Guntz, *Antoine* [*Nicolas*], preparation of barium, A., ii, 87.

Guntz, *Antoine*, and *Henry* **Bassett**, *jun.*, heat of formation of the hydride and nitride of calcium, A., ii, 300.

Gurewitsch, *Ch.* See *Michael I.* **Konowaloff**.

Gustavson, *Gabriel*, compounds of hydrogen chloride, hydrocarbons, and aluminium chloride ferments which are formed in Friedel and Craft's synthesis of benzene homologues, A., i, 334, 696.

Gutbier, *Alexander*, double salts of palladous chloride and bromide, A., i, 584.

derivatives of palladosammine chloride and bromide, A., i, 584.

colloidal tellurium. IV., A., ii, 24.

estimation of tellurium, A., ii, 116.

gravimetric estimation of nitric acid by means of nitron [1:4-diphenyl-3:5-*endo*anilodihydrotriazole], A., ii, 418.

Gutbier, *Alexander*, and *Gustav* **Hofmeier**, inorganic colloids, A., ii, 327.

colloidal metals of the platinum series. I., A., ii, 396, 533.

colloidal silver, A., ii, 452.

Gutbier, *Alexander*, and *A.* **Krell**, halogen derivatives of palladium, A., ii, 534.

Gutbier, *Alexander*, [with *A.* **Krell** and *R. L.* **Janssen**], palladium [compounds of amines with palladous halides], A., i, 876.

Gutbier, *Alexander*, and *Johann* **Lohmann**, action of hydrogen sulphide on selenious acid. I. Sensitiveness of selenium sulphide towards light, A., ii, 84.

action of hydrogen sulphide on selenious acid. II. Selenium sulphide, A., ii, 241.

nitroxyl chloride, A., ii, 243.

Gutbier, *Alexander*, and *F.* **Ransohoff**, compounds of ruthenium with oxygen, A., ii, 534.

Gutbier, *Alexander*, and *Friedrich* **Resenscheck**, action of hydrogen peroxide on tellurium, A., ii, 24.

iodometric estimation of telluric acid, A., ii, 116.

Gutbier, *Alexander*, and *Carl* **Trenkner**, halogen compounds of ruthenium, A., ii, 463.

Gutbier, *Alexander*, and *Walter* **Wagenknecht**, Frerich's estimation of tellurium, A., ii, 201.

Guthrie, *Charles Claude*. See *Orville H.* **Brown**.

Guthrie, *Frederick Bickell*, and *R.* **Helms**, pot experiments to determine the limits of endurance of different farm-crops for certain injurious substances, A., ii, 755.

Guthrie, *John Monteath*. See *John Simpson* **Ford**.

Gutmann, *August*, reduction of tetrathionates to sulphites by arsenite and stannite, A., ii, 384.

reduction of trithionates to sulphites by arsenites and stannites, A., ii, 813.

Guttmann, *Leo Frank*, the determination of melting points at low temperatures, T., 1037; P., 206.

Gutzeit, *Abraham*, and *Stanislaus von* **Kostanecki**, 3′-hydroxyflavonol, A., i, 366.

Guye, *Charles Eugène*, and *H.* **Guye**, disruptive discharge in gases at high pressures, A., ii, 668.

Guye, *Charles Eugène*, and *A.* **Schidlof**, magnetic hysteresis at high frequencies, A., ii, 228.

Guye, *Philippe A*[*uguste*], calculation of the exact molecular weights of the easily liquefiable gases from their densities; atomic weights of hydrogen, nitrogen, argon, chlorine, sulphur, and carbon, A., ii, 442.

atomic weight of nitrogen deduced from the ratio of the densities of nitrogen and oxygen, A., ii, 442.

Guye, *Philippe A.*, and *Stefan* **Bogdan**, determination of the atomic weight of nitrogen; gravimetric analysis of nitrous oxide, A., ii, 702.

Guye, *Philippe A.*, and *Alexandre* **Pintza**, densities of carbon dioxide, ammonia, and nitrous oxide, A., ii, 506.

Guye, *Philippe A.* See also *Jules* **Bolle**.

Guyot, *Alfred*, and *J.* **Catel**, derivatives of dihydroisobenzofuran, A., i, 226, 540.

synthesis in the anthracene series; condensation of dihydroisobenzofuran derivatives into 9:10-substituted anthracene derivatives, A., i, 516.

Guyot, *Alfred*, and *Léon Maurice* **Granderye**, amino-derivatives of phenyldiphenylenemethane and the corresponding carbinol, A., i, 248.

Guyot, *Alfred*, and *Ch.* **Staehling**, γ-substituted anthracene derivatives, A., i, 885.

Guyot, *Alfred.* See also *Albin* **Haller.**
Gwyer, *Alfred G. C.* See *Morris William* **Travers.**

H.

Haagn, *Ernst,* mercury arc lamp in vessels of fused silica, A., ii, 798.
Haane, *Gunnar.* See *F.* **Bengen.**
Haars, *Otto,* alkaloids of the subaërial parts of *Corydalis cava* and *Corydalis solida,* A., i, 462.
constitution of corydaline, A., i, 462.
Haas, *Ferdinand.* See *Richard* **Anschütz.**
Haas, *Gustav.* See *Alfred* **Einhorn.**
Haber, *Fritz,* and *Alexander* **Moser,** generator gas- and carbon-cells, A., ii, 667.
Haber, *Fritz,* and *Gabriel van* **Oordt,** formation of ammonia from its elements, A., ii, 159, 384, 814.
Habermann, *Josef,* experimental demonstration of the indestructibility of matter and of the law of multiple proportions; structure of the Bunsen flame; two alloys, A., ii, 693.
Hac, *R.* See *Jar.* **Milbauer.**
Hackspill, *L.,* preparation of rubidium and cæsium, A., ii, 585.
Hadfield, *Robert Abbott.* See *William Fletcher* **Barrett,** (*Sir*) *James* **Dewar,** and *John Arnold* **Fleming.**
Hällström, *Joh. A. af.,* nuclear synthetical equilibrium between phenols, bicarbonates, and phenolcarboxylic acids in aqueous solution, A., ii, 511.
Häse, *G.* See *Carl* **Liebermann.**
Haeussermann, *Carl,* acetylcelluloses, A., i, 574.
Hahn, *Albert W.* See *Henry Clapp* **Sherman.**
Hahn, *Oskar,* a new radioactive element which emits thorium radiation, A., ii, 432, 789.
Hahn, *Oskar,* and *Otto* **Sackur,** the degradation constant of the emanations from emanium and actinium, A., ii, 432.
Hahn, *Wilhelm.* See *August* **Michaelis.**
Håkanson, *G.* See *C.* **Hartwich.**
Hake, *Cecil Napier,* and *Reginald J.* **Lewis,** formation of sulphuric esters in the nitration of cellulose and their influence on stability, A., i, 512.
Hald, *P. Teteus,* action of potassium salts on the circulatory organs, A., ii, 836.
Haldane, *John Scott,* and *J. G.* **Priestley,** regulation of lung ventilation, A., ii, 400.
Haldane, *John Scott.* See also *Arthur Edwin* **Boycott** and *Mabel Purefoy* **Fitzgerald.**
Hale, *C. F.* See *Walter Parke* **Bradley.**
Hale, *William Jay.* See *Henry Barker* **Hill.**
Hall, *Elliot S.* See *Alexander* **Smith.**
Hall, *Roy D.,* and *Edgar Fahs* **Smith,** columbium, A., ii, 829.
Hall, *Roy D.* See also *Edgar Fahs* **Smith.**
Hallensleben, *Richard.* See *Adolf von* **Baeyer.**
Haller, *Albin,* the 1-methyl-4-alkyl-3-cyclohexanones and the corresponding phenols, homologues and menthone and menthol, A., i, 214.
camphoracetic and β-camphorpropionic acids, A., i, 601.
alkylthujones and compounds of thujone (tanacetone) with aldehydes, A., i, 602.
Haller, *Albin,* and *Gustave* **Blanc,** mixed derivatives of *d*-camphoric acid and β-campholide, A., i, 858.
Haller, *Albin,* and *A.* **Couréménos,** cyanocamphoracetic, α-cyanocamphorpropionic, and α-cyanocamphorisobutyric acids and their principal derivatives, A., i, 533.
Haller, *Albin,* and *Marcel* **Desfontaines,** increase in the rotatory power of aliphatic compounds on transformation into cyclic compounds, A., ii, 429.
Haller, *Albin,* and *Alfred* **Guyot,** syntheses in the anthracene series. III. 9:9:10:10-Tetraphenyldihydroanthracene and its derivatives, A., i, 188.
syntheses in the anthracene series. IV. Tetra-alkyl derivatives of 9:10-diaminodiphenyl-9:10-diphenyldihydroanthracene, A., i, 270.
Haller, *Albin,* and *François* **March,** a new method of synthesising alkyl derivatives of certain saturated cyclic alcohols; preparation of homologues of menthol, A., i, 276.
4-benzyl-1-methyl-3-cyclohexanol and 2:4-dibenzyl-1-methyl-3-cyclohexanol, A., i, 276.
action of aromatic aldehydes on sodium 1-methyl-3-cyclohexanoxide, A., i, 771.
Haller, *Albin,* and *Camille* **Martine,** a synthesis of menthone and menthol, A., i, 220.
menthones and menthols obtained by the catalytic reduction of pulegone with metallic nickel, A., i, 533.

Haller, *Albin*, and *Paul Thiébaud* **Muller**, constitution of sodium salts of certain acids containing a methylene or methinene grouping; alkyl cyanoacetates, acylcyanoacetates, malonates, and cyanomalonates; malononitrile and cyanocamphor, A., i, 112.

Halliburton, *William Dobinson*, effect on blood pressure of polypeptides, A., ii, 265.

Halphen, *Georges*, colour reaction of cotton seed oil, A., ii, 125.

detection of linseed oil in nut oil, A., ii, 560.

detection of olive oil which has been extracted by means of carbon disulphide, A., ii, 619.

Ham, *Charles Edward*, and *Hermann* **Baleau**, effect of acids on blood, A., ii, 402.

Ham, *Charles Edward*, and *Leonard Erskine* **Hill**, estimation of the gas set free in the body after rapid decompression from high atmospheric pressures, A., ii, 728.

oxygen inhalation as a means of preventing caisson and divers' sickness, A., ii, 728.

effect of increased carbon dioxide tension, together with increased atmospheric pressure, A., ii, 728.

Hamann, *Georg*. See *Paul* **Wagner**.

Hamburger, *Friedrich*, and *A. von* **Reuss**, action of unaltered proteid solutions on the leucocytes, A., ii, 744.

Hammarsten, *Olof*, preparation of crystallised taurocholic acid, A., i, 33.

chemistry of fishes' eggs, A., ii, 727.

Hamonet, (*l'Abbé*) *Jules Léandre*, normal diprimary glycols. I. Tetramethylene glycol, A., i, 403.

synthesis of diprimary substances, higher homologues of trimethylene derivatives, ethers, dihalogenated derivatives, glycols, &c., by the action of bromomethyl ethers of magnesium derivatives of bromo- (or iodo-) ethers of the type $RO(CH_2)_nMgBr$, A., i, 403.

syntheses in the pentamethylene series, A., i, 403.

hexamethylene glycol and its derivatives, A., i, 403.

Hand, *Adolf*, cyanide mud, A., i, 696.

Hansen, *C.* See *Valdemar* **Henriques**.

Hansen, *Emil Chr.*, occurrence in soil of Fungi causing alcohol fermentation, A., ii, 548.

Hantzsch, *Arthur* [*Rudolf*], the constitution and colour of diazo- and azo-compounds, P., 289.

Hantzsch, *Arthur* [*Rudolf*], nomenclature of compounds of variable constitution, A., i, 317.

action of hydroxylamine on ethyl isonitrosoacetoacetate, A., i, 408.

constitution of ammonium salts, A., i, 576.

oxonium and ammonium salts, A., i, 605.

normal diazoxides as primary products of the interaction of nitrosobenzenes and hydroxylamine, A., i, 617.

molecular weight of salts in indifferent solvents, A., ii, 305.

constitution of some nitrogen sulphonic acids, A., ii, 313.

constitution of Fremy's sulphazilate and of Pelouze's nitrosulphate, A., ii, 699.

Hantzsch, *Arthur*, and *Hugo* **Bauer**, [with *Friedrich* **Hofmann**], cyanuric acid derivatives, A., i, 330.

Hantzsch, *Arthur*, and *Wilhelm* **Graf**, additive compounds of tertiary amines, A., i, 575.

Hantzsch, *Arthur*, [with *Friedrich* **Hofmann** and *Martin* **Lehmann**], cyamelide, A., i, 331.

Hantzsch, *Arthur*, and *Bernhard C.* **Stuer**, new products from the action of ammonia on sulphuryl chloride, A., ii, 312.

Hantzsch, *Arthur*, and *Kenworthy J.* **Thompson**, isomerism of the so-called ethyl benzeneazocyanoacetates, A., i, 615.

Hantzsch, *Arthur*. See also *S. M.* **Auld**.

Harden, *Arthur*, zymase and alcoholic fermentation, A., ii, 275.

action of dextrose on the lactose-fermenting organisms of fæces, A., ii, 748.

Harden, *Arthur*, and *William John* **Young**, the influence of phosphates on the fermentation of glucose by yeast juice. Preliminary communication, P., 189.

the alcoholic ferment of yeast juice, A., ii, 109.

Hardenbergh, *H.* See *Henry Augustus* **Torrey**.

Hári, *Paul*, a new nitrogenous constituent of normal human urine, A., ii, 842.

Harker, *John Allen*, specific heat of iron at high temperatures, A., ii, 674.

new type of electric furnace, with a redetermination of the melting point of platinum, A., ii, 798.

Harpf, *August*, solubility of sulphur dioxide in water, A., ii, 383.

Harries, *Carl Dietrich*, varieties of caoutchouc; Weber's dinitrocaoutchouc, A., i, 223.

caoutchouc; decomposition and constitution of Para-caoutchouc, A., i, 364.

Harries, *Carl Dietrich*, and *Manuel* **Johnson**, transformation of carvone into α-phellandrene, A., i, 585.

Harries, *Carl Dietrich*, and *Hans* **Türk**, methylglyoxal and mesoxaldialdehyde, A., i, 413.

Harrington, *Bernard James*, modification of Victor Meyer's apparatus for the determination of vapour densities, A., ii, 676.

Harris, *Isaac Foust*. See *Thomas Burr* **Osborne**.

Harrison, *William Sandilands*. See *William Boog* **Leishman**.

Harry, *Frederick Thomas*, and *William Rest* **Mummery**, colorimetric estimation of salicylic acid in foodstuffs, A., ii, 426.

Hart, *Edwin Bret*. See *Lucius L. van* **Slyke**.

Harter, *Hans*. See *Conrad* **Willgerodt**.

Harter, *L. L.*, variability of wheat varieties in resistance to toxic salts, A., ii, 754.

Hartley, *Percival*. See *Julius Berend* **Cohen**.

Hartley, *Walter Noel*, the preparation of murexide from alloxantin and alloxan, T., 1791; P., 166.

the absorption spectra of uric acid, murexide, and the ureides, in relation to colour and their chemical structure, T., 1796; P., 166.

observations on chemical structure and those physical properties on which the theory of colour is based, T., 1822; P., 167.

constitution of nitric acid and its hydrates, A., ii, 815.

Hartmann, *Hilderich*. See *Ernst* **Schmidt**.

Hartmann, *Johannes* [*Franz*], determination of wave-lengths in the spectrum of Giesel's emanium, A., ii, 666.

Hartwell, *Burt Laws*, *Alfred W.* **Bosworth**, and *J. W.* **Kellogg**, estimation of phosphoric acid by the method of ignition with magnesium nitrate and by that of digestion with acids, A., ii, 353.

Hartwell, *Burt Laws*. See also *Homer Jay* **Wheeler**.

Hartwich, *C.*, and *G.* **Håkanson**, *Glyceria fluitans*, an almost forgotten cereal, A., ii, 854.

[**Hartwich**, *C.*, and] *A.* **Hellström**, a white Peru balsam, A., i, 454.

Hartwich, *C.*, and *A.* **Viullemin**, mustard seed, A., ii, 492.

Hartwigsson, *H.*, estimation of sulphur in iron ores, slags, and lime, A., ii, 552.

Harvey, *Alfred William*, α-benzylphenylallylmethylammonium compounds; a complete series of four optically active salts, T., 1481; P., 228.

Haselhoff, *Emil*, action of sulphur dioxide, zinc oxide, and zinc sulphate on soils and plants, A., ii, 193.

injurious action of ammonium thiocyanate [on seeds and plants], A., ii, 196.

manurial experiments at the Agricultural Experimental Station, Marburg, A., ii, 650, 854.

Hasenclever, *Peter*. See *Carl* **Friedheim**.

Hashimoto, *Sagoro*, composition of abnormal milk and ash constituents, A., ii, 738.

Haskins, *H. D.* See *John James Rickard* **Macleod**.

Haslam, *Henry Cobden*, separation of proteids, A., i, 495.

Hasselberg, *Clas Bernhard*, spectra of the metals in the electric arc. VII. Spectrum of tungsten, A., ii, 129.

Hassler, *F.* See *Max* **Dennstedt**.

Hasslinger, *Rudolf von*. See *Alfred* **Lipschitz**.

Hassreidter, *V.*, solubility of copper sulphide in alkali polysulphides, A., ii, 285, 611.

Hatai, *Shinkishi*, excretion of nitrogen in the white rat, A., ii, 740.

Hauser, *Otto*, zirconium sulphates, A., ii, 531.

new class of iron compounds, A., ii, 715.

Hausmann, *Walther*, antagonistic action of saponin and cholesterol, A., ii, 744.

Hawk, *Philip Bouvier*, Eck's fistula in dogs, A., ii, 183.

Hawthorne, *John*. See *Augustus Edward* **Dixon**.

Haynes, (*Miss*) *Dorothy*. See *James Charles* **Philip**.

Haywood, *John Kerfood*, composition of the lime, sulphur, and salt wash, A., ii, 312.

Haywood, *John Kerfood*, and *Bernard H.* **Smith**, the hydrogen peroxide method of estimating formaldehyde, A., ii, 771.

Heberlein, *Eduard*. See *Friedrich Wilhelm* **Küster**.

Hébert, *Alexandre*, and *Georges* **Truffaut**, chrysanthemums. II., A., ii, 475.

Hébert, *Alexandre*. See also *Eugène* **Charabot**.
Hedin, *Sven Gustav*, action of trypsin, A., ii, 541.
antitryptic action of serum albumin, A., ii, 541.
Heen, *P. de*, experimental demonstrations of thermal phenomena developed in phosphorescent substances; validity of physical theories, A., ii, 434.
Heen, *P. de*. See also *H.* **Micheels**.
Heerde, *R.*, and *E.* **Busch**, estimation of albumin in barley, A., ii, 364.
Hefelmann, *Rudolf*, occurrence of boric acid in common salt, A., ii, 652.
Heffter, [*Karl Wilhelm*] *Arthur*, products obtained by the autoxidation of eosin, A., i, 897.
Heffter, *Arthur*, and *R.* **Capellmann**, attempts to synthesise mezcaline, A., i, 877.
Heide, *Richard von der*. See *Eduard* **Buchner**.
Heijl, *C.* See *Johan Erik* **Johansson**
Heikel, *Gunnar*, birotation of galactose, A., i, 173.
Heile, *Bernhard*, isoform, a new antiseptic, A., ii, 847.
Heim, *Friedrich*. See *Jakob* **Meisenheimer**.
Heine, *O.* See *Karl A.* **Hofmann**.
Heintschel, *Erwin*, condensation of hydroxyquinol with aldehydes, A., i, 809.
Heintzel, *Hans*. See *Otto* **Diels**.
Heinze, *Berthold*, production and utilisation of glycogen by lower vegetable organisms, A., ii, 344.
Hell, *Carl* [*Magnus*], [*p*-methoxyphenylethylcarbinol], A., i, 436.
Hell, *Carl*, and *Alexander* **Hofmann**, *p*-methoxyphenylethylcarbinol, A., i, 58.
o- and *p*-methoxyphenylethylcarbinols and the corresponding anetholes, A., i, 435.
Heller, *Gustav*, constitution of anthranil, A., i, 130.
Heller, *Gustav*, and *Heinrich L.* **Meyer**, fluorescein and the non-existence of *β*-*p*-dibromodinitrobenzene, A., i, 788.
Heller, *Hans*. See *Arnold* **Reissert**.
Heller, *Ida*. See *Paul* **Pfeiffer**.
Heller, *W.* See *Rudolf* **Schenck**.
Hellsten, *A. F.*, influence of alcohol, sugar, and tea on the contractility of muscle, A., ii, 335
Hellström, *A.* See *C.* **Hartwich**.
Helms, *R.* See *Frederick Bickell* **Guthrie**.
Hemmelmayr [**von Augustenfeld**], *Franz von* [*Josef*], nitro-derivatives of *β*-resorcylic acid [2:4-dihydroxybenzoic acid], A., i, 288.
action of phosphorus pentasulphide on carbamide and thiocarbamide, A., i, 695.
Henderson, *Lawrence Joseph*, heats of combustion of atoms and molecules, A., ii, 145.
Henderson, *Lawrence Joseph*. See also *Theodore William* **Richards**.
Henderson, *V. E.*, and *Otto* **Loewi**, action of vaso-dilators, A., ii, 730.
physiology of the kidneys. V. Mechanism of urea diuresis, A., ii, 739.
influence of pilocarpine and atropine on the circulation through the submaxillary gland, A., ii, 743.
Henderson, *V. E.* See also *Otto* **Loewi**.
Henderson, *William Hope*. See *Carl* **Friedheim**.
Henderson, *Yandell*, and *Edward Francis* **Crofutt**, fate of oil injected subcutaneously, A., ii, 735.
Henle, *Franz*, salts of benzamide with dicarboxylic acids, A., i, 437.
reduction of derivatives of carboxylic acids to derivatives of aldehydes. II., A., i, 490.
Henle, *Franz*, and *Gustav* **Schupp**, action of hydrogen chloride on mixtures of nitriles and aldehydes or ketones, A., i, 413.
preparation of mesoxaldialdehyde, A., i, 413.
Henneberg, *Wilhelm*, resting yeast in moist and pressed conditions; action of foreign organisms on the behaviour and duration of life of yeast cells, A., ii, 274.
acidifying and fermenting yeast mashes (behaviour of *Bacillus Delbrücki* at different temperatures), A., ii, 848.
Hennecke, *H.*, new process for titrating iodine, A., ii, 281.
Henrard, *I. T.* See *Johan Frederik* **Eijkman**.
Henri, *Victor*, action of enzymes, toxins, antitoxins, and agglutinins, A., ii, 237.
physico-chemical researches on hæmolysis, A., ii, 265.
Henri, *Victor*, and *André* **Mayer**, composition of colloidal granules, A., ii, 14.
Henri, *Victor*. See also (*Mlle.*) *P.* **Cernovodeanu**.
Henrich, *Ferdinand* [*August Karl*], a correction [α-nitrosoresorcinol monoethyl ethers], A., i, 201.

Henrich, *Ferdinand* [*August Karl*], the Wiesbaden thermal springs and their radioactivity, A., ii, 6, 221.
apparatus for separating nitrogen quickly and completely from a mixture of gases containing it, A., ii, 24.
Henrich, *Ferdinand*, and *Günther* **Bugge,** radioactive constituents of Wiesbaden thermal springs, A., ii, 568.
Henrich, *Ferdinand*, and *F.* **Schierenberg,** an oxidation product of aminoorcinol monomethyl ether, A., i, 93.
Henriques, *Valdemar*, and *C.* **Hansen,** proteid synthesis in the animal body, A., ii, 180.
Henry, *Ed.*, fixation of atmospheric nitrogen by dead leaves, A., ii, 111.
decomposition of fallen leaves, A., ii, 112.
Henry, *Louis*, aminoethyl ether, A., i, 119.
fusibility in the series of normal diprimary glycols, A., i, 254.
normal C_9 secondary alcohols, A., i, 402.
derivatives of *aaa*-trichloroisopropyl alcohol, A., i, 558.
derivatives of *n*-hexoic acid, A., i, 561.
condensation of nitromethane with alkyl derivatives of aminomethyl alcohol, A., i, 609, 661.
crystals of *s*-tetrachloroisopropyl formal, A., i, 634.
stoichiometrical laws and the atomic theory, A., ii, 81.
Henry, *Thomas Anderson*. See *Wyndham Rowland* **Dunstan.**
Henschke, *Fritz*, condensation of phenol with formaldehyde, A., i, 429.
Henze, *Martin*, hæmocyanin, A., i, 164.
muscle of octopods, A., ii, 270.
Hepner, *Albert*. See *August* **Michaelis.**
Hepp, *Eduard*. See *Otto* **Fischer.**
Hepter, *J.* See *H.* **Goldmann.**
Herbette, *Jean*, new form of thallium tartrate; isomorphous mixtures of thallium and potassium tartrates, A., i, 566.
Hérissey, *Henri*, preparation of crystalline gentiogenin, A., i, 805.
Hérissey, *Henri*. See also *Emile* **Bourquelot.**
Heritage, *Gertrude*. See *Elmer Peter* **Kohler.**
Hermann, *Hugo*, ultimate analysis of organic substances, A., ii, 767.
Hermann, *Peter*, anilides of rhamnose and arabinose, A., i, 327.
Hermann, *Richard*, nitrophenyldiguanides, A., i, 950.
Herold, *Fr.* See *Heinrich* **Kiliani.**
Herold, *Ignaz*, causticising potassium sulphate, A., ii, 584.
Herrenschmidt, *H.*, purification of sodium vanadate liquors; the processes of double decomposition for the industrial separation of metals, A., ii, 41.
Herrick, *James Bryan*. See *Emil* **Abderhalden.**
Herrmann, *Erich*, occurrence of lithium in the human body, A., ii, 735.
Herrmann, *Felix*, compounds of gold with organic sulphur groups, A., i, 733.
Herrmann, *Karl*. See *Willy* **Marckwald.**
Herter, *Christian Archibald*, influence of fever on the reducing action of the organism, A., ii, 103.
Hertzka, *Richard*, condensation of dibenzyl ketone with aldehydes under the influence of hydrochloric acid, A., i, 291.
Hervieux, *Ch.* See *Charles* **Porcher.**
Herz, *Albert*. See *Emil* **Knoevenagel.**
Herz, *Paul*, by-products from the preparation of piperonalindigotin and its oxidation, A., i, 778.
Herz, *Walter* [*Georg*], and *Herbert* **Fischer,** distribution of soluble substances between water and amyl alcohol, A., ii, 79.
distribution of soluble substances between water and aromatic hydrocarbons, A., ii, 304.
Herz, *Walter*, and *M.* **Knoch,** solubilities in mixtures of solvents. II., A., ii, 510.
solubilities in mixed solvents. III. Solubility of calcium hydroxide in aqueous glycerol, A., ii, 709.
the molecular weight of mercuric silver iodide, A., ii, 822.
Herz, *Walter*. See also *Albert* **Ladenburg.**
Herzberg, *Gustav*. See *Georg* **Schroeter.**
Herzberg, *W.*, detection of wood-fibre, A., ii, 657.
Herzig, *Josef*, and *Jacques* **Pollak,** brazilin and hæmatoxylin, A., i, 605.
Herzig, *Josef*, and *Rudolf* **Tscherne,** methylated tannin, A., i, 354.
Herzog, *Franz*. See *Conrad* **Willgerodt.**
Herzog, *Johannes*, caryophyllin, A., i, 804.
Herzog, *Reginald Oliver*, velocity of enzymatic reactions. II., A., i, 164.
Hesehus, *Nicolaus A.*, heat actions of radium bromide, naphthalene, and camphor, A., ii, 297.

Hess, *A.*, determination of volume change on liquefaction, A., ii, 373.
Hess, *Hans.* See *Carl* **Graebe**.
Hess, *Walter.* See *Otto* **Fischer**.
Hesse, *A.*, a new burette for testing normal solutions, A., ii, 55.
a simple method for the estimation of the fat in butter, A., ii, 125.
estimation of fat and water in butter by Gerber's method, A., ii, 869.
Hesse, [*Julius*] *Oswald*, lichens and their characteristic constituents. IX., A., i, 138.
some archil lichens and their chromogens, A., i, 140.
coto bark, A., ii, 752.
Hessenland, *M.* See *Karl* **Auwers**.
Heteren, *Willem Jacob van*, tin amalgams, A., ii, 39.
supposed allotropy of gold, A., ii, 260.
Heubner, *Otto.* See *Max* **Rubner**.
Heubner, *Wolfgang*, fibrinoglobulin, A., i, 725.
mytolin, a proteid from muscle, A., ii, 841.
physiological action of physostigmine, A., ii, 847.
Hewitt, *John Theodore*, and *John Jacob* **Fox**, studies in the acridine series. Part II. Action of methyl iodide on benzoflavine (2:8-diamino-5-phenyl-3:7-dimethylacridine), T., 1058; P., 215.
Hewitt, *John Theodore*, and *Herbert Victor* **Mitchell**, the nitration of substituted azophenols, T., 225; P., 61.
the constitution of *o*-hydroxyazo-compounds. Preparation of benzeneazodimethylcoumarin, P., 298.
azo-derivatives from α-naphthamethylcoumarin, P., 302.
Hewitt, *Thomas Edwin*, colorimetric estimation of phosphorus [in iron], A., ii, 353.
Heyden, *Friedr.* See **Chemische Fabrik von Heyden**.
Heyn, *E.*, and *O.* **Bauer**, copper, tin, and oxygen, A., ii, 169.
Hibbert, *Eva.* See *Edmund* **Knecht**.
Hickey, *Charles H.* See *Gregory Paul* **Baxter**.
Hicks, *William Longton.* See *Arthur Walsh* **Titherley**.
Hidden, *William Earl*, minerals [tengerite? &c.] from Llano County, Texas, A., ii, 535.
Hiendlmaier, *H.* See *Karl A.* **Hofmann**.
Higley, *George Oswin*, and *Wilbur Pardon* **Bowen**, excretion of carbon dioxide during exercise, A., ii, 44.
Hildebrandt, *Hermann*, *o*-thymotinpiperidide, A., i, 80.
pharmacological studies on synthetical bases of the piperidine series, A., i, 153.
pharmacology of ammonium bases, A., ii, 743.
pharmacology of some condensation products of *p*-aminoacetophenone with aldehydes, A., ii, 743.
pharmacology of sulphones, A., ii, 744.
Hill, *Charles Alexander*, lead in pharmacopœial chemicals, A., ii, 356.
Hill, *Henry Barker*, and *Otis Fisher* **Black**, 4-nitro-5-pyrazolone, A., i, 381.
Hill, *Henry Barker*, and *William Jay* **Hale**, condensation of nitromalonaldehyde with benzyl methyl ketone, A., i, 200.
Hill, *Hibbert Winslow*, strong sterilisable dialysing membrane, A., ii, 682.
Hill, *Leonard Erskine.* See *Charles Edward* **Ham**.
Hille, *Waldemar.* See *Julius* **Tröger**.
Hillebrand, *William Francis*, emmonsite (?) from a new locality, A., ii, 97.
two tellurium minerals from Colorado, A., ii, 723.
[**Hillebrand**, *William Francis*, *Charles Benjamin* **Dudley**, *Henry Newlin* **Stokes**, *Clifford* **Richardson**], report from committee on uniformity in analysis. I., A., ii, 197.
Hillebrand, *William Francis.* See also *Waldemar* **Lindgren**.
Hills, *James Stuart*, and *William Palmer* **Wynne**, linin, T., 327; P., 74.
Hiltner, *Lorenz*, and *L.* **Peters**, seedling diseases of sugar-beet and mangolds, A., ii, 413.
Hinden, *Fritz*, condensers with ball mouth-piece, A., ii, 632.
Hines, *Murray Arnold.* See *Gregory Paul* **Baxter**.
Hinkins, *J. E.*, formation of acids by enzymes, A., ii, 183.
Hinrichs, *Carl G.*, detection of nitrates by diphenylamine, A., ii, 763.
Hinrichs, *Gustav Dethlef*, the true atomic weight of nitrogen, A., ii, 517.
Hinrichsen, *Ferdinand Willy*, [with *Oscar* **Lohse** and *Marie* **Reimer**], unsaturated compounds. II., A., i, 132.
Hinrichsen, *Ferdinand Willy*, and *Eugen* **Sachsel**, formation and solubility of double chlorides of iron and the alkali metals, A., ii, 92.

Hinrichsen, *Ferdinand Willy*. See also *Richard* **Abegg**.
Hinsberg, *Oscar* [*Heinrich Daniel*], methylation of dibenzenesulphonebenzidine, A., i, 241.
action of sulphur on aniline and aniline hydrochloride, A., i, 339.
[thioanilines], A., i, 518.
dihydroazines, A., i, 840.
Hinsberg, *Oscar*, and *J.* **Kessler**, separation of primary and secondary amines, A., i, 338.
action of alkylene haloids on *m*- and *p*-dibenzenesulphophenylenediamines, A., i, 722.
Hiorns, *Arthur H.*, alloys of copper and bismuth, A., ii, 461.
Hirt, *W. B.*, and *Frederick William* **Steel**, a rapid volumetric method for the estimation of phosphoric acid, A., ii, 857.
Hissink, *D. J.*, Deli tobacco, A., ii, 414.
Hissink, *D. J.*, and *H. van der* **Waerden**, Pemberton's method for the estimation of phosphoric acid, A., ii, 419.
Hlavnička, *Ottokar Josef*, titration of phosphoric acid, A., ii, 419.
Hodgkinson, *William Richard Eaton*, and *Arthur Herbert* **Coote**, apparatus for heating substances in a vacuum at constant temperatures, A., ii, 488.
Höber, *Rudolf* [*Otto Anselm*], influence of salts on the resting current of frog's muscle, A., ii, 270.
Höchtlen, *F.* See *Karl A.* **Hofmann**.
Hönigschmid, *Otto*. See *Hans* **Meyer**.
Hoering, *Paul*, oxides of propenylphenol ethers and their conversion into the isomeric ketones, A., i, 592.
dibromides of aromatic propenyl compounds. III. Behaviour of anethole dibromide and isosafrole dibromide on oxidation, A., i, 902.
dibromides of aromatic propenyl compounds. IV. Substitution in, and elimination of bromine atoms from, dibromides, A., i, 903.
dibromides of aromatic propenyl compounds. V. Oxides of propenyl compounds and their reactions, A., i, 903.
Hörlein, *H.* See *Ludwig* **Knorr**.
Hofer, *Hans*, and *Martin* **Moest**, [electrolysis of potassium acetate], A., i, 8.
Hoff, *Jacobus Henricus van't*, oceanic salt deposits. XLII. Formation of glauberite, A., ii, 464.
Hoff, *Jacobus Henricus van't*, and *Walter Charles* **Blasdale**, formation of oceanic salt deposits. XLIII. Calcium content of the constant solutions at 25°, A., ii, 641.
Hoff, *Jacobus Henricus van't*, and *Ludwig Anton* **Lichtenstein**, formation of oceanic salt deposits. XL. Limits of existence of tachyhydrite, A., ii, 262.
Hoff, *Jacobus Henricus van't*, and *Wilhelm* **Meyerhoffer**, formation of oceanic salt deposits. XXXIX. Temperatures of transformation below 25°, A., ii, 175.
Hoff, *Jacobus Henricus van't*, *Gerardus Leonardus* **Voerman**, and *Walter Charles* **Blasdale**, formation of oceanic salt deposits. XLI. Temperature of formation of potassium pentacalcium sulphate, A., ii, 319.
Hoffbauer, *O.* See *Alexander* **Tschirch**.
Hoffman, *Alfred*. See *Marston Taylor* **Bogert**.
Hoffman, *William Edwin, jun.* See *John Bishop* **Tingle**.
Hoffmann, *Friedrich*, and *K.* **Langbeck**, influence of one substance on the solubility of another substance, A., ii, 374.
Hoffmann, *George Christian*, souesite, a native iron-nickel alloy from British Columbia, A., ii, 328.
Hoffmann, *J. E.*, dampness of grain, A., ii, 753.
Hofmann, *Alexander*. See *Carl* **Hell**.
Hofmann, *Friedrich*. See *Arthur* **Hantzsch**.
Hofmann, *J. A.* See *Torald* **Sollmann**.
Hofmann, *Karl A*[*ndreas*], action of acetylene on mercuric chloride solution, A., i, 2, 268.
action of sulphur on aniline and aniline hydrochloride, A., i, 427.
explosive mercury compounds, A., i, 513.
Hofmann, *Karl A.*, and *H.* **Feigel**, decompositions of ethanemercarbide with alkali sulphites and sulphur chloride, A., i, 867.
Hofmann, *Karl A.*, *K. L.* **Gonder**, and *Valentin* **Wölfl**, induced radioactivity, A., ii, 71.
Hofmann, *Karl A.*, *O.* **Heine**, and *F.* **Höchtlen**, blue iron-cyanogen compounds, A., i, 38.
Hofmann, *Karl A.*, and *H.* **Hiendlmaier**, simple method for the preparation of pyridine perchromate for demonstration purposes, A., i, 821.
perchromates, A., ii, 716.
Hofmann, *Karl A.*, and *W.* **Metzener**, ultramarine, A., ii, 589.
Hofmann, *Karl A.*, and *F.* **Resenscheck**, blue iron-cyanogen compounds. II., A., i, 756.
Hofmann, *Karl A.*, and *E.* **Seiler**, preparation of hexachloroethane, A., i, 730.

Hofmann, *Kurt.* See *Robert* **Stollé.**
Hofmann, *Robert*, proof of the formation of complexes between acids with the help of the laws of isohydric solutions, A., ii, 235.
Hofmeier, *Gustav.* See *Alexander* **Gutbier.**
Holborn, *Ludwig* [*Friedrich Christian*], and *L.* **Austin**, specific heat of gases at high temperatures, A., ii, 228.
Holde, *David*, *Leo* **Ubbelohde**, and *Julius* **Marcusson**, natural heptadecoic acid, A., i, 318.
Holdermann, *E.*, zincum boricum or oxyboricum, A., ii, 34.
Holdermann, *Karl.* See *Roland* **Scholl.**
Hollard, *Auguste*, and *L.* **Bertiaux**, [analysis of] commercial lead, A., ii, 63.
analysis of commercial tin and its alloys, A., ii, 67.
Holleman, *Arnold Frederik*, simultaneous formation of isomeric substitution derivatives of benzene. X. Nitration of dichlorobenzenes, A., i, 41.
nitration of disubstituted benzenes, A., i, 42.
preparation of pure *o*-toluidine and a method for ascertaining its purity, A., i, 272.
nitration of fluorobenzene. II., A., i, 515.
[**Holleman**, *Arnold Frederik*, and] *Johannes Willem* **Beekman**, fluorobenzene and some of its derivatives, A., i, 41.
Holleman, *Arnold Frederik*, and *Coenraad Lodewijk* **Jungius**, examination of *o*-nitrotoluene for the presence of small quantities of *p*-nitrotoluene, A., ii, 864.
Holleman, *Arnold Frederik*, *F. H. van der* **Laan**, and *H. J.* **Slijper**, preparation of cyclohexanol, cyclohexanone, and derivatives, A., i, 443.
Holleman, *M.*, action of potassium cyanide on ω-nitrostyrolene [β-nitrostyrene], A., i, 42.
secondary phenylnitroethanol, A., i, 58.
o-fluoronitrobenzene and other aromatic fluoro-derivatives, A., i, 424.
action of potassium cyanide on potassium *m*-nitrobenzenesulphonate, A., i, 595.
Holley, *Clifford D.*, and *J. T.* **Weaver**, liquid mixtures of minimum boiling point, A., ii, 675.
Hollmann, *Reinhard Friedrich*, decomposition of hydrated mixed crystals. II., A., ii, 154.
Holm, *F. H.*, β-alanine, A., i, 29.
β-alacreatine (β-guanidopropionic acid), A., i, 29.
Holmberg, *B.*, ester-acids of sulphur-substituted carbonic acids with aliphatic hydroxy-acids, A., i, 323.
Holmes, *Willis Boit.* See *Alexander* **Smith.**
Holt, *Alfred*, *jun.* See *Charles Hutchens* **Burgess** and *David Leonard* **Chapman.**
Holtz, *Wilhelm*, very unequal electrodes; valve cells; metal vegetation, A., ii, 670.
Homfray, (*Miss*) *Ida Frances*, molecular refractions of some liquid mixtures of constant boiling point, T., 1430; P., 225.
molecular refractions of dimethylpyrone and its allies and the quadrivalency of oxygen, T., 1443; P., 226.
Honcamp, *Fr.* See *Albin* **Köhler.**
Honda, *J.*, skimmianine, an alkaloid from *Skimmia japonica*, A., i, 152.
Honda, *Kōtarō*, and *Sumu* **Shimizu**, Villari's critical point in the case of nickel, A., ii, 76.
Hopfgartner, *Karl*, standardisation of potassium permanganate solutions by means of silver, A., ii, 484.
Hoppe, *J.* See *Walter* **Dieckmann.**
Hortvet, *Julius*, composition and analysis of maple syrup and maple sugar, A., ii, 122.
Hoton, *L.*, solubility of glycerides in acetic acid and its application to the analysis of butter, A., ii, 426.
detection of cocoanut oil in lard, A., ii, 870.
Houben, [*Heinrich Hubert Maria*] *Josef*, synthesis of aldehydes by means of formic acid, A., i, 600.
action of magnesium alkyl haloids on amines and on ammonium, amine, and hydrazine salts, and a new method of formation of hydrocarbons, A., i, 873.
Houdas, *Jules.* See *L.* **Guignard.**
Houghton, *Elijah Mark*, pharmacology of ethyl salicylate, A., ii, 409.
Howard, *David Lloyd*, separation of strychnine and brucine, A., ii, 779.
Howden, *R.* See *Fred* **Ibbotson.**
Howitz, *Joh.*, and *M.* **Bärlocher**, 6-hydroxyquinolones and some alkyl haloid derivatives of 5-bromo-6-hydroxyquinoline, A., i, 375.
Howitz, *Joh.*, and *Wilhelm* **Schwenk**, derivatives of 8-quinolinealdehyde, A., i, 471.

Howitz, *Joh.*, and *Kurt* **Witte**, replacement of bromine by chlorine in quinoline derivatives and halogenated 8-hydroxyquinolones, A., i, 469.

Hüfner, [*Carl*] *Gustav von*, and *William* **Küster**, hæmochromogen and carbon monoxide, A., i, 252.

Hüfner, *Gustav von*, and *B.* **Reinbold**, absorptiometric estimation of the amount of nitric oxide combined by unit weight of methæmoglobin, A., i, 252.

Hüthig, *O.* See *Heinrich* **Walbaum**.

Hüttner, *K.*, gases dissolved in minerals, A., ii, 172.

Hüttner, *K.*, and *Gustav* **Tammann**, melting points and transition points of some salts, A., ii, 229.

alloys of antimony and bismuth, A., ii, 327.

Hugounenq, *Louis* [*Marie-Joseph*], and *Albert* **Morel**, condensation of natural leucine and carbamic acid, A., i, 178.

the carbimide of natural (*l*) leucine, A., i, 264.

carbamide derivatives of natural (*l*) leucine, A., i, 332.

hæmatogen, A., i, 556.

Huiskamp, *Willem*, presence of fibrinoglobulin in fibrinogen solutions, A., i, 499.

Hulett, *George Augustus*, solubility of gypsum as affected by size of particles and by different crystallographic surfaces, A., ii, 247.

Hulett, *George Augustus*, and *H. W.* **Berger**, volatilisation of platinum, A., ii, 42.

Humann, *Alfred*. See *Rudolf* **Nietzki**.

Hundeshagen, *Franz*, behaviour of vanadium compounds towards metallic gold and gold solutions, A., ii, 639.

Hunt, *Reid*, influence of thyroid feeding on poisoning by acetonitrile, A., ii, 847.

Hunter, *Albert Edward*. See *Frederic Stanley* **Kipping**.

Hunter, *Andrew*, specificity of precipitins, A., ii, 539.

precipitins for snake venoms and snake sera, A., ii, 539.

Hunter, *Matthew A.*, velocity of decomposition of nitrous oxide, A., ii, 805.

Hunter, *W. H.* See *Henry Augustus* **Torrey**.

Hurst, *H. E.* See *John Sealy Edward* **Townsend**.

Hurt, *Hugo*. See *Carl* **Mai**.

Hussak, *Eugen*, atopite from Brazil, A., ii, 398.

occurrence of palladium and platinum in Brazil, A., ii, 598.

Hutchins, *Edgar Burton, jun.*, chemistry of the tellurates, A., ii, 701.

I.

Ibbotson, *Fred*, and *R.* **Howden**, estimation of chromium in steel, A., ii, 119, 120.

Ibele, *J.* See *Emil* **Besthorn**.

Idaszewski, *Kasimir S.* See *Guido* **Bodländer**.

Ilsky, *Longinus*, combination of hydrogen bromide with itaconic anhydride, A., i, 323.

Imhoff, *M.* See *Felix* **Kaufler**.

Impens, *Émile*, local anæsthesia produced by alypin, A., ii, 842.

Inchley, *Orlando*, pilocarpine and other reagents in relation to precipitin immunity, A., ii, 601.

Inchley, *Orlando*. See also *Walter Ernest* **Dixon**.

Ingham, *Leslie Howard*, electrolytic estimation of nitric acid with a rotating anode, A., ii, 61.

use of a rotating anode in the electrolytic estimation of zinc, A., ii, 63.

Ingle, *Herbert*, the available plant food in soils, T., 43.

Irvine, *James Colquhoun*, and *Adam* **Cameron**, a contribution to the study of alkylated glucosides, T., 900; P., 191.

Irvine, *James Colquhoun*, and (*Miss*) *Agnes Marion* **Moodie**, the alkylation of mannose, T., 1462; P., 227.

Irvine, *James Colquhoun*. See also *Thomas* **Purdie**.

Issaew, *Wladimir*, yeast catalase, A., ii, 547.

malt oxydase, A., ii, 646.

Issoglio, *Giovanni*, isomeric oxypyridines from β-ketones, A., i, 609.

Issoglio, *Giovanni*. See also *Icilio* **Guareschi**.

Istomin, *A. W.*, addition of iodine chloride to isobutylene, A., i, 165.

Itallie, *Leopold van*, evaluation of aloes, A., ii, 779.

the existence of a cyanogenetic compound in *Thalictrum aquilegifolium*, A., ii, 852.

Iwanoff, *W. N.*, new burette for volumetric analyses, A., ii, 349.

J.

Jackson, *Charles Loring*, and *Henry A.* **Carlton**, certain derivatives of tetrabromo-*o*-benzoquinone, A., i, 907.

Jackson, *Charles Loring*, and *Latham* **Clarke**, bromine additive compounds of dimethylaniline, A., i, 768.
curcumin, A., i, 804.
rosocyanin, A., i, 804.
additive compounds of quinones and tertiary amines, A., i, 908.

Jackson, *Charles Loring*, and *Frederick William* **Russe**, behaviour of tetrabromo-*o*-benzoquinone towards ketones and aldehydes, A., i, 217.

Jackson, *Charles Loring*, and *Philip A.* **Shaffer**, action of methyl alcohol on hexabromo-*o*-quinocatechol ether, A., i, 888.

Jackson, *Herbert*, and *Dudley* **Northall-Laurie**, the action of carbon monoxide on ammonia, T., 433; P., 118; discussion, P., 118.

Jackson, *W. H.*, method of transmission of the excited activity of radium to the cathode, A., ii, 792.

Jacobius, *Ludwig*. See *Carl* **Friedheim**.

Jacobs, *Charles B.*, deposition of alloys from mixed solutions, A., ii, 626.

Jacobsen, *Jules*, pyknometer for small quantities (0·1—0·5 gram) of solid substances, A., ii, 232.

Jacobson, *Paul* [*Heinrich*], triphenylmethyl, A., i, 186.

Jacoby, *Martin*, receptivity of cells in normal and immunised animals, A., ii, 47.

Jaeger, *F. M.*, isomeric dichloronitrobenzenes, A., i, 583.
o-nitrobenzyltoluidine, A., i, 585.
miscibility in the solid state, and isomorphism, in the case of carbon compounds, A., ii, 513.

Jaeger, *Wilhelm*, and *Helmuth von* **Steinwehr**, calorimetric measurement of heats of combustion, A., ii, 677.

Jänecke, *Ernst*, detection and estimation of traces of mercury in urine, with the aid of the Nernst balance, A., ii, 66.

Järvinen, *K. K.*, estimation and separation of calcium in presence of phosphoric acid, A., ii, 62.
estimation of magnesium and phosphoric acid as magnesium pyrophosphate, A., ii, 555.

Jaffé, *Max*, *p*-methylaminobenzoic acid, A., i, 344.
behaviour of *p*-dimethylaminobenzaldehyde in animal metabolism, A., ii, 186.

Jahn, *Artur*. See *Paul* **Jannasch**.

Jahn, *Hans* [*Max*], depression of the freezing point in dilute solutions of highly dissociated electrolytes, A., ii, 145.

Jahn, *Stephan*, ozone. I. Equilibrium between ozone and hydrochloric acid, A., ii, 16.

Jakowlew, *Iwan*. See *Carl Adam* **Bischoff**.

Jalowetz, *Eduard*, isomaltose, A., i, 262.

James, *Thomas Campbell*. See *John Joseph* **Sudborough**.

Jamieson, *George Samuel*, the natural iron-nickel alloy, awaruite, A., ii, 535.

Jamieson, *George Samuel*. See also *Samuel Lewis* **Penfield** and *Henry Lord* **Wheeler**.

Jannasch, *Paul* [*Ehrhardt*], expulsion of ammonium salts after precipitation in their presence, A., ii, 611.
supplementary remarks on the hydroxylamine method, A., ii, 613.

Jannasch, *Paul*, and *Wilhelm* **Cohen**, quantitative separations in presence of hydroxylamine. V., A., ii, 612.

Jannasch, *Paul*, and *Artur* **Jahn**, reduction of chlorates, bromates, and iodates with a view to the estimation of the halogens, A., ii, 416.

Jannasch, *Paul*, and *Otto von* **Mayer**, quantitative separation of gold from other metals by hydrazine or hydroxylamine salts, A., ii, 557.
reaction of hydrazine and hydroxylamine salts with salts of the platinum metals and separation of these from gold, A., ii, 557.

Jannasch, *Paul*, and *Friedrich* **Rühl**, separation of iron from manganese and magnesium, and of aluminium and chromium from manganese, zinc, nickel, and magnesium by hydroxylamine in ammoniacal solution. IV., A., ii, 612.

Jannasch, *Paul*, and *Johannes* **Schilling**, quantitative separation of iron and thorium from uranium by hydroxylamine in ammoniacal solution. VI., A., ii, 613.

Janssen, *R. L.* See *Alexander* **Gutbier**.

Japp, *Francis Robert*, and *Joseph* **Knox**, some derivatives of anhydracetonebenzil, T., 673; P., 152.
the dihydrocyanides of benzil and phenanthraquinone. Second notice, T., 681; P., 153.
a condensation product of mandelonitrile, T., 701; P., 153.

Japp, *Francis Robert*, and *James* **Wood**, action of hydrazine on unsaturated γ-diketones, T., 707; P., 154.
condensations of phenanthraquinone with ketonic compounds, T., 712.

Jaquerod, *Adrien*, and *François Louis* **Perrot**, use of helium as thermometric substance and its diffusion through quartz, A., ii, 10.
expansion and density of some gases at high temperatures: application to the determination of their molecular weights, A., ii, 506.
melting point of gold, and expansion of some gases at high temperatures. I. and II., A., ii, 627, 720.
Jasinsky, *Andreas*. See *Carl Adam* **Bischoff**.
Jassonneix. See **Binet du Jassonneix**.
Jatzewitsch, *M. G.* See *Michael I.* **Konowaloff**.
Jaubert, *George F.*, action of boric acid on the alkali peroxides; formation of perborates, A., ii, 26.
preparation of oxygen, A., ii, 311.
Jaubert, *George F.*, [with *Gaston* **Lion**], sodium perborate; hydrogen peroxide in *statu nascendi*, A., ii, 585.
Jaufmann, *Josef*, radioactivity of atmospheric precipitations and of surface waters, A., ii, 662.
Jeans, *J. H.*, determination of the size of molecules from the kinetic theory of gases, A., ii, 14.
Jene, *K.*, estimation of sulphur in burnt pyrites, A., ii, 350.
estimation of carbon in ferrosilicon, A., ii, 355.
electrolytic estimation of zinc, A., ii, 653.
Jenkins, *John H. B.*, and *David Gibson* **Riddick**, the microscopic examination of metals, A., ii, 118.
Jenner, *N.*, apparatus for absorption of hydrogen sulphide in iron and steel analysis, A., ii, 282.
Jensen, *Orla*, volatile fatty acids in cheese; biology of the cheese ferment, A., ii, 114.
estimation of the volatile fatty acids in palm oils and butter, A., ii, 772.
Jeroch, *Willi*. See *Otto* **Ruff**.
Jerome, *William J. Smith*, influence of fruit on the precipitation of the uric acid of the urine, A., ii, 543.
Joannis, [*Jean*] *Alexandre*, action of potassammonium on barium bromide, A., ii, 450.
Jodlbauer, *A.*, and *Hermann von* **Tappeiner**, photochemical action of mercuric oxalate (Eder's solution) in absence of oxygen and in presence of fluorescent compounds, A., ii, 565.
participation of oxygen in the action of fluorescent substances, A., ii, 603.
Jodlbauer, *A.* See also *Hermann von* **Tappeiner**.
Johannsen, *Otto*. See *Otto* **Ruff**.
Johansson, *Johan Erik*, *J.* **Billström**, and *C.* **Heijl**, output of carbon dioxide after the administration of various sugars, A., ii, 329.
Johns, *Karl O.* See *Treat Baldwin* **Johnson**.
Johnson, *Frederick Murray Godschall*. See *James Wallace* **Walker**.
Johnson, *Manuel*. See *Carl Dietrich* **Harries**.
Johnson, *Treat Baldwin*, [with *Samuel Hopkins* **Clapp**], pyrimidines; 5-amino-6-oxy-2-ethylthiolpyrimidine. XI., A., i, 835.
Johnson, *Treat Baldwin*, and *Karl O.* **Johns**, pyrimidines; action of aqueous and alcoholic ammonia and aniline on some halogen- and thiol-pyrimidines. X., A., i, 836.
Johnson, *Treat Baldwin*. See also *Henry Lord* **Wheeler**.
Johnstin, *Ruth M.* See *Elmer Peter* **Kohler**.
Johnston, *John*, methylation of *p*-aminobenzoic acid by means of methyl sulphate. Preliminary note, P., 156.
Johnston, *John*. See also *James* **Walker**.
Jolles, *Adolf* [*F.*], colorimetric estimation of iron in blood, A., ii, 67, 206.
estimation of catalases in blood, A., ii, 215.
Jolles, *Adolf*, and *Moritz* **Oppenheim**, blood-ferments, A., ii, 265, 600.
Jolly, *W. A.* See *Swale* **Vincent**.
Jones, *David Trevor*, note on certain derivatives of cyclopropene, T., 1062; P., 216.
Jones, *Harry Clary*, atomic weight of radium and the periodic system, A., ii, 789.
Jones, *Harry Clary*, and *Harry Preston* **Bassett**, determination of the relative velocities of the ions of silver nitrate in mixtures of the alcohols and water and on the conductivity of such mixtures, A., ii, 8.
approximate composition of the hydrates formed by certain electrolytes in aqueous solutions at different concentrations. X., A., ii, 445.
influence of temperature on the amount of water of crystallisation as evidence supporting the theory of the existence of hydrates in solution, A., ii, 509.
approximate composition of the hydrates formed by a number of electrolytes in aqueous solutions, together with a brief general discussion of the results thus far obtained. XIII., A., ii, 687.

Jones, *Harry Clary*, and *Charles G.* **Carroll**, conductivities of certain electrolytes in water, methyl and ethyl alcohols, and mixtures of these solvents; relation between conductivity and viscosity, A., ii, 73.

Jones, *Harry Clary*, and *Augustus P.* **West**, temperature-coefficients of conductivity in aqueous solutions and the effect of temperature on dissociation, A., ii, 794.

Jones, *Humphrey Owen*, a further analogy between the asymmetric nitrogen and carbon atoms, T., 135; P., 10.

the stereoisomerism of substituted ammonium compounds, T., 1721; P., 237; discussion, P., 238.

the stereochemistry of nitrogen, A., ii, 1.

Jones, *Humphrey Owen*. See also (*Miss*) *M. B.* **Thomas**.

Jones, *Walter*, occurrence of guanase in the spleen of oxen and its non-occurrence in the spleen of pigs, A., ii, 644.

Jones, *Walter*, and *Milton Charles* **Winternitz**, adenase, A., ii, 333.

Jong, *Anne Willem Karel de*, essential oil of patchouli; action of sulphuric acid on oil of patchouli, A., i, 802.

milk of *Castilloa elastica*, A., ii, 52.

estimation of alkaloids in Coca leaves, A., ii, 778.

Jordis, *Eduard* [*Friedrich Alexander*], theory of colloids, A., ii, 153, 447.

hydration and hardening, A., ii, 155.

silicates of the alkaline earths, A., ii, 248.

silicic acid. III., A., ii, 317.

silicate analysis. I., A., ii, 610.

"setting" and "hardening" of cement, A., ii, 709.

Jordis, *Eduard*, and *E. H.* **Kanter**, silicates. IV., A., ii, 88, 161, 248.

Jorissen, *Armand*, presence of chromium and vanadium in coal from Liége, A., ii, 535.

Jorissen, *Willem Paulinus*, and *Wilhelm Eduard* **Ringer**, oxidation of benzaldehyde in the presence of acetic anhydride, A., i, 354.

action of radium rays on mixtures of hydrogen and chlorine, A., ii, 219.

Jouck, *Karl*, the cyanogenetic glucosides in the leaves of the cherry-laurel (*Prunus Laurocerasus*) and in the bark of the bird-cherry (*P. Padus*), A., i, 912.

Jowett, *Hooper Albert Dickinson*, preparation and properties of 1:4:5-trimethylglyoxaline, T., 405; P., 116.

the constitution of pilocarpine. Part V. Conversion of isopilocarpine into pilocarpine, T., 794; P., 172.

bromomethyl heptyl ketone, P., 117.

chemical examination of Cascara bark, A., ii, 192.

Jowett, *Hooper Albert Dickinson*, and *Charles Etty* **Potter**, the constitution of barbaloin. Part I., T., 878; P., 181; discussion, P., 182.

Jowett, *Hooper Albert Dickinson*. See also *George* **Barger** and *Wyndham Rowland* **Dunstan**.

Juch, *Viktor*, behaviour of hydroxysalicylic acid [quinolcarboxylic acid] towards oxidising agents, A., i, 701.

Judd, (*Miss*) *Hilda Mary*. See *Martin Onslow* **Forster**.

Jüngermann, *E.*, reactions of isoamylanthrone chloride and bromide, A., i, 795.

Jüngst, *Edward*, and *Rudolf* **Mewes**, preparation of silicides, borides, aluminides, &c., A., ii, 316.

Jüptner [**von Jonstorff**], *Hanns* (*Freiherr*), free energy of formation, A., ii, 16.

Juillard, *Paul*, nitro-derivatives of orange IV. I. and II., A., i, 843.

Jungfleisch, *Émile* [*Clément*], the phosphorescence of phosphorus, A., ii, 244.

Jungfleisch, *Émile*, and *Marcel* **Godchot**, lactyl-lactyl-lactic acid and the dilactide of inactive lactic acid, A., i, 259.

d-lactic acid, A., i, 318.

d-lactide, A., i, 630.

Jungius, *Coenraad Lodewijk*, conversion of diazoamino-*p*- into aminoazo-*p*-toluene in the solid state, A., i, 555.

isomeric changes of some dextrose derivatives, and the mutarotation of the sugars, A., i, 573.

Jungius, *Coenraad Lodewijk*. See also *Arnold Frederik* **Holleman**.

Junius, *Adolf*, molybdates, A., ii, 825.

Juppen, *Carl*, and *Stanislaus von* **Kostanecki**, 7:4′-dihydroxyflavonol, A., i, 79.

Just, *M.* See *Albin* **Köhler**.

K.

K., estimation of silicon in 50 per cent. ferro-silicon, A., ii, 420.

Kaas, *Karl*, constitution of β-isocinchonicine, A., i, 151.
constitution of α-iso-ψ-cinchonicine and of β-isocinchonicine, A., i, 296.
Kačer, *Philipp*, and *Roland* **Scholl**, some diazonium salts of the anthraquinone series, A., i, 102.
Kačer, *Philipp*. See also *Roland* **Scholl**.
Kadiera, *Victor*, action of sulphuric acid on diphenylamine, A., i, 934.
Kämmerer, *Heinrich*. See *Walter* **Dieckmann**.
Kahlbaum, *Georg W*[*ilhelm*] *A*[*ugust*], and *Max* **Steffens**, spontaneous action of metals on sensitive films of photographic plates without direct contact, A., ii, 295.
Kahlbaum, *Georg W. A.*, and *E.* **Sturm**, alteration of specific gravity, A., ii, 680.
Kahlenberg, *Louis* [*Albert Berthold*], recent investigations bearing on the theory of electrolytic dissociation, A., ii, 139.
Kahlenberg, *Louis*, and *Herman* **Schlundt**, liberation of hydrogen during the action of sodium on mercury, A., ii, 387.
Kalb, *Ludwig*. See *Richard* **Willstätter**.
Kalle & Co., [indophenol from *p*-phenylenediamine and *o*-acetylaminophenol], A., i, 157.
haloid acid salts of peptones, A., i, 252.
brown sulphur dye from 2:4:5-triaminotoluene, A., i, 540.
trihydroxyphenylrosinduline, A., i, 554, 840.
bromodialkylacetamides, A., i, 638.
Kamerlingh Onnes, *H.*, and *C.* **Zakrzewski**, validity of the law of corresponding states for mixtures of methyl chloride and carbon dioxide, A., ii, 149.
Kanitz, *Aristides*, influence of temperature on the assimilation of carbon dioxide, A., ii, 848.
Kanter, *E. H.* See *Edvard* **Jordis**.
Karaoglanoff, *Z.*, oxidation and reduction in the electrolysis of solutions of salts of iron, A., ii, 674.
Kareff, *N.* See *Maurice* **Doyon**.
Karlík, *V.*, apparatus for gas analysis, A., ii, 279.
Kasansky, *Alexander*, action of allyl iodide on ethyl succinate in presence of zinc; γ-diallylbutyrolactone, A., i, 320.
Kaschinsky, *Paul*, separation of iron and aluminium from manganese, calcium, and magnesium in ash analysis, A., ii, 423.
Kassner, *Georg* [*Max Julius*], oxidation phenomena, A., ii, 19.
Kastle, *Joseph Hoeing*, method for the determination of the affinities of acids colorimetrically by means of certain vegetable colouring matters, A., ii, 154.
Kastle, *Joseph Hoeing*, and *Walter Pearson* **Kelley**, rate of crystallisation of plastic sulphur, A., ii, 21.
Katayama, *Tomio*, is the availability of phosphoric acid in bone-dust modified by the presence of gypsum? A., ii, 347.
Kauffmann, *Hugo* [*Josef*], modern position of the benzene theory, A., i, 868.
investigation of fluorescence, A., ii, 783.
Kauffmann, *Hugo*, and *Alfred* **Beisswenger**, solvent and fluorescence, A., ii, 131.
Kehrmann's explanation of change of fluorescence, A., ii, 218.
the ring system of benzene. VII., A., i, 280.
Kauffmann, *Hugo*, and *Ad.* **Grombach**, the ring system of benzene. VIII., A., i, 280.
triphenylcarbinols, A., i, 773.
Kauffmann, *Maurice*, gelatin in metabolism, A., ii, 735.
Kaufler, *Felix*, and *M.* **Imhoff**, dibromoanthracene tetrabromide, A., i, 124.
Kaufler, *Felix*. See also *Robert* **Gnehm**.
Kaufmann, *A.* See *Iwan* **Koppel**.
Kausch, *Oscar*, new methods of producing ozone by means of electricity, A., ii, 698, 811.
Kautzsch, *Karl*. See *Emil* **Fischer**.
Kay, *Francis William*, and *William Henry* **Perkin**, *jun.*, experiments on the synthesis of the terpenes. Part V. Derivatives of *o*-cymene, T., 1066; P., 216.
Kaye, *Frederick*. See *Philip* **Schidrowitz**.
Kayser, *E.*, lactic acid fermentation, A., ii, 750.
Kehrmann, [*Johann August Ludwig*] *Friedrich*, azoxonium compounds. II. and III., A., i, 930, 949.
Kehrmann, *Friedrich*, and *H. de* **Gottrau**, action of hydroxylamine hydrochloride on naphthaphenoxazone, A., i, 670.
Keil, *Gustav*. See *Karl* **Auwers**.
Kelley, *Walter Pearson*. See *Joseph Hoeing* **Kastle**.
Kellogg, *J. W.* See *Burt Laws* **Hartwell**.

Keppeler, *Gustav*, estimation of acetone by the iodoform process, A., ii, 360.
Kernot, *Giuseppe*, nitrotolylglycollic [nitrotolyloxyacetic] acids, A., i, 286.
Kernot, *Giuseppe*, and *E.* **Petrone**, condensation of benzyl chloride with the aminobenzoic acids, A., i, 283.
Kersten, *M.* See *Oscar* **Doebner**.
Kessler, *J.* See *Oscar* **Hinsberg**.
Kester, *Frederik Edward*, Joule-Thomson effect in carbon dioxide, A., ii, 303.
Kestner, *E.* See *Pavel Iw.* **Petrenko-Kritschenko**.
Keutner, presence and distribution of nitrogen-fixing bacteria in the sea, A., ii, 189.
Kiesel, *K.*, the specificity of certain digestive ferments, A., ii, 540.
Kieser, *A.* See *Wilhelm* **Manchot**.
Kijner, *Nic. M.*, transformations of amides of α-haloid acids under the action of bromine and alkali hydroxide, A., i, 332.
cyclobutanone, A., i, 355.
aminocyclopropane, A., i, 517.
cyclobutyldimethylcarbinol and its transformations, A., i, 772.
preparation of ethyl tetramethylene-1:1-dicarboxylate, A., i, 786.
Kijner, *Nic. M.*, and *W.* **Amosoff**, cyclobutyldiethylcarbinol and its compounds, A., i, 772.
Kiliani, *Heinrich*, digitonin, A., i, 364.
digitalonic acid, A., i, 859.
Kiliani, *Heinrich*, and *Fr.* **Herold**, dihydroxypropanetricarboxylic and αγ-dihydroxyglutaric acids, A., i, 739.
Kiliani, *Heinrich*, and *Peter* **Loeffler**, constitution of metasaccharinic acid, A., i, 737.
dihydroxyglutaric acids, A., i, 858.
Kilroe, *J. R.*, mechanical analysis of soils and sub-soils by centrifugal action; with notes on treatment of samples, A., ii, 68.
Kind, *Walter*. See *Robert* **Stollé**.
King, *Arthur Scott*, emission spectra of metals in the electric furnace, A., ii, 217.
Kionka, *Heinrich*, gout, A., ii, 742.
Kippe, *Otto*. See *Richard* **Stoermer**.
Kippenberger, *Carl*, new forms of [analytical] laboratory apparatus, A., ii, 608.
Kipper, *Hermann*, use of phenyl ether in the Friedel-Crafts reaction, A., i, 648.
Kipper, *Hermann*. See also *Fritz* **Ullmann**.
Kipping, *Frederic Stanley*, isomeric salts of the type $NR_1R_2R_3$. A correction. Isomeric forms of *d*-bromo- and *d*-chloro-camphorsulphonic acids, T., 628; P., 124.
organic derivatives of silicon, P., 65.
isomerism of α-bromo- and α-chlorocamphor, P., 125.
Kipping, *Frederic Stanley*, and *Albert Edward* **Hunter**, *l*-phenylethylamine, P., 126.
Kircher, *Adolf*, alkaloids from certain species of Datura which induce mydriasis, A., i, 717.
Kirkby, *P. J.*, union of hydrogen and oxygen at low pressures through the passage of electricity, A., ii, 236.
union of hydrogen with oxygen at low pressures caused by the heating of platinum, A., ii, 695.
Kirpal, *Alfred*, pyridine-2:3:4-tricarboxylic acid, A., i, 234.
Kirpitschnikoff, *S.*, oxidation of the higher homologues of aniline on the fibre, A., i, 540.
Kirschner, *Aage*, estimation of butter-fat and cocoanut oil in margarine, A., ii, 213.
Kirschner, *M.* See *Karl* **Löffler**.
Kishi, *Yoshinori*. See *Mitsuru* **Kuhara**.
Kissin, *Wulf*. See *Carl Adam* **Bischoff**.
Kissling, *Richard*, heating of mineral oils when shaken with concentrated sulphuric acid, A., ii, 863.
Kitt, *Moritz*, elæomargaric acid, A., i, 10.
Klages, [*Wilhelm*] *August* [*Hermann*], [*p*-methoxyphenylethylcarbinol], A., i, 344, 645.
phenylmethylethylene oxide and its conversion into hydratropaldehyde, A., i, 523.
Klages, *August*, and *Richard* **Sautter**, optically active benzene hydrocarbons and phenolic ethers, A., i, 579.
Klarfeld, *Heinrich*, action of water on hexylene dibromide (from mannitol), A., i, 166.
Klauser, *Oskar*. See *Herman* **Decker**.
Kldiaschwili, *Alexander*, dichloroacetyldextrin, A., i, 634.
Kleeman, *R.* See *William Henry* **Bragg**.
Kleine, *A.*, apparatus for estimating sulphur in iron and steel, A., ii, 856.
Kleine, *G.* See *Ernst* **Schmidt**.
Kliegl, *Alfred*, condensation of benzaldehyde with toluene, A., i, 186.
phenylfluorene, A., i, 187.
Klimont, *Isidor*, fat of the fruits of the Dipterocarpus species, A., ii, 126.
composition of solid fats of plants, A., ii, 475.

Kling, *André*, oxidation of acetol (acetylcarbinol), A., i, 3.
chlorination of methyl ethyl ketone, A., i, 172.
mechanism of the chlorination of mixtures of ketones and water in presence of marble, A., i, 327.
hydrates of acetol [acetylcarbinol], A., i, 402.
action of alkalis on aqueous solutions of acetol, A., i, 503.
propionylcarbinol and its derivatives, A., i, 503.
acetylmethylcarbinol (β-hydroxy-γ-ketobutane), A., i, 504.
aqueous solutions of acetylcarbinol, A., i, 625.
ketonic alcohols, A., i, 732.
Klinkerfues, *Friedrich*, estimation of potassium, A., ii, 204, 859.
Klobb, [*Constant*] *Timothée*, a dihydric alcohol related to phytosterol, A., i, 594.
Klöffler, *H.* See *G.* **Blume**.
Klotz, *Oskar*, soaps in certain pathological conditions, A., ii, 187.
Klüger, *Alfred*, ethoxyacetaldehyde and its condensation product with formaldehyde, A., i, 683.
Knecht, *Edmund*, symmetrical trinitroxylenol, A., i, 53.
constituents of Manchester soot, A., ii, 703.
Knecht, *Edmund*, and *Eva* **Hibbert**, use of titanium trichloride in volumetric analysis. II., A., ii, 872.
Knoch, *M.* See *Walter* **Herz**.
Knöll, *Wilhelm.* See *Rudolf Friedrich* **Weinland**.
Knoevenagel, [*Heinrich*] *Emil* [*Albert*], condensing action of organic bases, A., i, 61.
condensation products from fatty aldehydes and negatively-substituted acetic acids, A., i, 169.
ethyl citrylideneacetoacetate, A., i, 170.
nitriles of hydroxy- and amino-carboxylic acids, A., i, 179.
Knoevenagel, *Emil*, and *Friedrich* **Albert**, condensation of vanillin with ethyl acetoacetate and its analogues, A., i, 62.
Knoevenagel, *Emil*, and *Robert* **Arnot**, condensation of salicylaldehyde with ethyl cyanoacetate, ethyl benzoylacetate, or acetylacetone, A., i, 65.
Knoevenagel, *Emil*, and *Albert* **Herz**, condensation of cinnamaldehyde with ethyl malonate and acetylacetone, A., i, 63.
Knoevenagel, *Emil*, and *Ernst* **Langensiepen**, condensation of salicylaldehyde and of β-hydroxy-α-naphthaldehyde with ethyl acetonedicarboxylate, A., i, 64.
Knoevenagel, *Emil*, and *Siegbert* **Mottek**, condensing action of organic bases, A., i, 61.
Knoevenagel, *Emil*, and *Fritz* **Schröder**, condensation of β-hydroxy-α-naphthaldehyde with ethyl acetoacetate and its analogues, A., i, 63.
Knoevenagel, *Emil*, and *Leonhard* **Walter**, condensation of aliphatic nitro-compounds with aromatic aldehydes by means of organic bases, A., i, 65.
Knoop, *Franz*, formation of aromatic fatty acids in the animal body, A., ii, 46.
Knoop, *Franz*, and *Adolf* **Windaus**, relationships between carbohydrates and the nitrogenous products of metabolism, A., i, 509.
constitution of histidine, A., i, 834.
Knoop, *Franz.* See also *Adolf* **Windaus**.
Knorr, *Ludwig*, synthetical bases from methylmorphol and thebaol and their behaviour towards reagents which decompose methylmorphimethine, A., i, 813.
thebainone from codeinone, A., i, 922.
Knorr, *Ludwig*, *H.* **Hörlein**, and *Paul* **Roth**, piperidoethyl ether, A., i, 821.
piperazine derivatives from methylchloroethylamine and chloroethylpiperidine, A., i, 834.
Knorr, *Ludwig*, and *Georg* **Meyer**, aminoethyl ether, A., i, 747.
Knorr, *Ludwig*, and *Robert* **Pschorr**, degradation of morphothebaine to non-nitrogenous phenanthrene derivatives, A., i, 814.
decomposition products of thebainone, A., i, 922.
Knorre, *Georg* [*Karl*] *von*, employment of persulphate for quantitative separations, A., ii, 285.
estimation of tungsten, A., ii, 286.
estimation of sulphuric acid by means of benzidine hydrochloride, and the estimation of sulphur in pyrites, A., ii, 351.
Knott, *Cargill Gilston*, magnetisation and resistance of nickel wire at high temperatures, A., ii, 228.
Knox, *Joseph.* See *Francis Robert* **Japp**.
Koch, *A. E.* See *F. A.* **Norton**.
Koch, *Anton.* See *Edgar* **Wedekind**.
Koch, *Arthur A.* See *Gustav* **Fernekes**.

Koch, *Carl*. See *Carl* **Paal**.
Koch, *John*, determination of refractive indices of hydrogen, carbon dioxide, and oxygen in the infra-red, A., ii, 661.
Koch, *Otto*. See *Herman* **Decker**.
Koch, *Peter*. See *Paul* **Pfeiffer**.
Koch, *Waldemar*, origin of creatinine, A., ii, 182.
Köhler. See **Du Roi**.
Köhler, *Albin*, *Fr.* **Honcamp**, *M.* **Just**, *Justus* **Volhard**, *M.* **Popp**, and *Otto* **Zahn**, assimilation of calcium and phosphoric acid from various calcium phosphates by growing animals, A., ii, 265.
Köhler, *Hugo*. See *Otto* **Wallach**.
Koelichen, *Karl*. See *Friedrich Wilhelm* **Küster**.
Koelker, *Wilhelm F.* See *Emil* **Fischer**.
König, *Berthold*, spatial formula for benzene, A., i, 185.
König, *James*. See also *Lothar* **Wöhler**.
König, [*Franz*] *Josef*, estimation of the fertility and manurial requirements of soils, A., ii, 278.
decomposition of vegetable foods by Bacteria, A., ii, 747.
König, *Josef*, and *J.* **Bettels**, the carbohydrates of marine Algæ and their products, A., ii, 851.
König, *Josef*, and *P.* **Rintelen**, proteids of wheat gluten and its relations to the baking properties of wheat flour, A., ii, 113.
König, *Josef*, *Alb.* **Spieckermann**, and *Fr.* **Seiler**, decomposition of fodder and foods by micro-organisms. V. Composition of the products formed by the Bacteria, A., ii, 472.
Koenigs, *Ernst*. See *Emil* **Fischer**.
Koenigs, *Wilhelm*, and *Karl* **Bernhart**, reduction of 4-methyl-3-ethylpyridine with sodium and alcohol, A., i, 824.
3:4-diethylpyridine, 3:4-diethylpiperidine, and 3-ethylquinuclidine, A., i, 824.
Koenigsberger, *Johann Georg*, and *O.* **Reichenheim**, electrical conductivity and absorptive power for heat radiations of metallic sulphides and oxides occurring naturally, A., ii, 624.
Köppe, *Hans*, laking of red corpuscles; estimation of the volume of the blood-corpuscles, A., ii, 331.
Koeppen, *Albert*, betaine ethyl ester hydrochloride, A., i, 176.
preparation of trimethylamine by methylation of ammonia by means of formaldehyde, A., i, 328.
Koerber, *U.* See *Carl Johann* **Blacher**.
Köthner, *Paul*, atomic weight of iodine, A., ii, 310.
Köthner, *Paul*, and *E.* **Aeuer**, atomic weight of iodine, A., ii, 81, 156.
Kohler, *Elmer Peter*, action of organomagnesium compounds on cinnamylideneacetophenone, A., i, 358.
reaction between unsaturated compounds and organic magnesium compounds. VI. Reactions with ethyl benzylidenemalonate, A., i, 700.
Kohler, *Elmer Peter*, and *Gertrude* **Heritage**, reaction between organic magnesium compounds and unsaturated compounds. II. Reactions with derivatives of cinnamic acid, A., i, 207.
reaction between unsaturated compounds and organic magnesium compounds. IV. Reactions with esters of α-phenylcinnamic acid, A., i, 208.
Kohler, *Elmer Peter*, and *Ruth M.* **Johnstin**, reactions between organic magnesium compounds and unsaturated compounds. III. Reactions with compounds containing bromine, A., i, 215.
Kohler, *Elmer Peter*, and *Marie* **Reimer**, reaction between unsaturated compounds and organic magnesium compounds. V. Reactions with α-cyanocinnamic acid, A., i, 347.
Kohlrausch, *Friedrich* [*Wilhelm Georg*], solubility of some sparingly soluble salts in water at 18°, A., ii, 152.
Kohlschütter, [*Johannes*] *Volkmar*, and *K.* **Vogdt**, solid solutions of indifferent gases in uranium oxide, A., ii, 394, 826.
Kohn, *Moritz*, derivatives of diacetonealkamines. IV., A., i, 928.
hydroxy-β-isohexylamine, A., i, 929.
Kohn, *Moritz*. See also *Adolf* **Franke**.
Kohn, *Siegfried*, action of dilute sulphuric acid on propionepinacone, A., i, 167.
Kohn-Abrest, *Émile*, different states of oxidation of aluminium powder, A., ii, 637.
Kolb, *Adalbert*, and *Hermann* **Ahrle**, use of organic acids for the precipitation and separation of thorium dioxide from cerium, lanthanum, and didymium oxides, A., ii, 288.
Kolb, *Adalbert*, and *Emil* **Davidson**, action of hydrochloric acid on potassium chlorate, A., ii, 59.
Kollock, (*Miss*) *Lily Gavit*, and *Edgar Fahs* **Smith**, use of the rotating anode and mercury cathode in electroanalysis. I., A., ii, 859.

Kollock, (*Miss*) *Lily Gavit*. See also *Edgar Fahs* **Smith**.

Kondakoff, *Iwan L.*, stereoisomeric menthols, A., i, 798.

Kondakoff, *Iwan L.*, and *Iwan* **Schindelmeiser**, synthetical and natural phellandrene, A., i, 801.

Konek von Norwall, *Fritz* (*Edler*), and *Arthur* **Zöhls**, sodium peroxide in organic analysis, A., ii, 60.

Koning, *C. J.*, biological and biochemical studies on milk, A., ii, 273.

the decomposition phases of milk, A., ii, 473.

the acidity of milk, A., ii, 647.

Konowaloff, *Michael I.*, resemblance between iron salts of organic acids and salts of nitro-derivatives, A., i, 8.

nitrating action of nitric acid on saturated hydrocarbons. IX. Nitration of *o*-xylene and its products, A., i, 762.

Konowaloff, *Michael I.*, and *Stanislaw* **Dobrowolsky**, diphenylpropanes, especially αα-diphenylpropane, A., i, 763.

nitrating action of nitric acid on saturated hydrocarbons. XII. Nitration of homologues of diphenylmethane in the side-chain, A., i, 764.

Konowaloff, *Michael I.*, and *Ch.* **Gurewitsch**, nitrating action of nitric acid on saturated hydrocarbons. X. Nitration in acetic acid solution, A., i, 763.

Konowaloff, *Michael I.*, and *M. G.* **Jatzewitsch**, nitrating action of nitric acid on saturated hydrocarbons. XI. Non-nuclear nitration of homologues of diphenylmethane, A., i, 763.

Konowaloff, *Michael I.*, and *S.* **Woinitsch-Sianoschensky**, preparation of new polymethyleneimines by Ladenburg's method, A., i, 826.

Konschegg, *Artur*, a new methyleneindoline base, A., i, 924.

Konsortium für Elektrochemische Industrie, electrolytic preparation of sodium, A., ii, 819.

Kopetzki, *O.*, movement of nitrogenous compounds and pentoses in beet products during fabrication, A., ii, 194.

Kopp, *Émile*. See *Emilio* **Noelting**.

Koppel, *Iwan*, chromous sodium thiocyanate, A., i, 638.

Koppel, *Iwan*, *Reszö* **Goldmann**, and *A.* **Kaufmann**, compounds of quadrivalent vanadium. III., A., ii, 593.

Koppel, *Iwan*, and *A.* **Kaufmann**, the preparation of metallic vanadium and some vanadium compounds, A., ii, 593.

Koppel, *Ivan*, [with *H.* **Wetzel** and *Alfred* **Gumperz**], formation and solubility of analogous double salts, A., ii, 689.

Koppeschaar, *W. F.*, new method of estimating magnesium carbonate in limestone, A., ii, 421.

Koraen, *Gunnar*, carbon dioxide production in muscular work, A., ii, 329.

Korbuly, *Michael*. See *Franz* **Tangl**.

Korndörfer, *Georg*, glycocyamine and glycocyamidine, A., i, 29.

creatinine, A., i, 152.

Korschun, *Georg*, synthesis of 2:3:5-trimethylpyrrole, A., i, 373.

Korte, *Reinhold Frederick*, solid solutions, T., 1503; P., 229.

Kosinenko, *Wladislaus*. See *Georg* **Berju**.

Kossel, *Albrecht* [*Carl Ludwig Martin Leonhard*], formation of protamines in the animal body, A., ii, 467.

Kossel, *Albrecht*, and *Henry Drysdale* **Dakin**, further researches on protamines, A., i, 620.

Kossowitsch, *P.*, mutual action of salts in the mineral nutrition of plants, A., ii, 548.

estimation of the carbon dioxide given off by roots during their development, A., ii, 549.

Kostanecki, *Stanislaus von*, [2-hydroxydibenzyl], A., i, 433.

Kostanecki, *Stanislaus von*, and *Stanislaus* **Nitkowski**, synthesis of fisetin, A., i, 915.

Kostanecki, *Stanislaus von*, *Arnold* **Rost**, and *Wladislaus* **Szabrański**, 2-hydroxydibenzyl, A., i, 341.

Kostanecki, *Stanislaus von*, and *Friedrich* **Rudse**, an isomeride of quercitol, A., i, 367.

Kostanecki, *Stanislaus von*, and *Berthold* **Schreiber**, an isomeride of kaempferol, A., i, 808.

Kostanecki, *Stanislaus von*, and *Jacob* **Sulser**, stilbene derivatives, A., i, 352.

Kostanecki, *Stanislaus von*, and *Anton von* **Szlagier**, 7:2′-dihydroxyflavonol, A., i, 77.

Kostanecki, *Stanislaus von*, and *Albert* **Widmer**, 7:3′-dihydroxyflavonol, A., i, 78.

Kostanecki, *Stanislaus von*. See also *Isaak* **Berstein**, *Marie* **Breger**, *Anna* **Edelstein**, *Casimir* **Funk**, *Abraham* **Gutzeit**, and *Carl* **Juppen**.

Kotake, *Y.*, fate of vanillin in the animal body, A., ii, 645.

Kotschubey, *A.*, composition of benzidine chromate, A., i, 549.

Kovář, *Frantisek*, [graphite from Moravia; nigrine (?) from Bohemia], A., ii, 173.
[meerschaum and jarosite], A., ii, 175.
Kraemer, *Henry*, the copper treatment of water, A., ii, 108.
Krafft, [*Wilhelm Ludwig*] *Friedrich* [*Emil*], boiling point vacuum; a new constant and its meaning, A., ii, 144.
Krafft, *Friedrich*, and *Ludwig* **Bergfeld**, lowest temperature of evaporation of metals in the vacuum of the cathode light, A., ii, 144.
Krafft, *Friedrich*, and *Paul* **Lehmann**, molecular weight determination by the rise of the boiling point in the cathode light vacuum, A., ii, 143.
Krasnosselsky, *T.*, respiration and fermentation of mould fungi in roll cultures, A., ii, 108.
Kraus, *Charles August*. See *Edward Curtis* **Franklin**.
Krause, *M.* See *Ludwig* **Brieger**.
Krawkoff, *S.*, action on the soil of the mineral constituents of plant residues soluble in water, A., ii, 606.
Krécsey, *Béla*, apparatus for preparing liquid sulphur dioxide, A., ii, 312.
Kreider, *David Albert*, iodine titration voltameter, A., ii, 569.
Kreider, *J. Lehn*, apparatus for estimating volatile substances by loss of weight, A., ii, 280.
behaviour of typical hydrated bromides when heated in an atmosphere of hydrogen bromide, A., ii, 636.
Krejčí, *Augustin*, [alteration product of topaz], A., ii, 177.
Krell, *A.* See *Alexander* **Gutbier**.
Kremann, *Robert* [*Konrad*], melting point curve for mixtures of anthracene and picric acid, A., i, 270.
fusion of dissociating compounds and the degree of dissociation of the fused substance, A., ii, 76.
influence of substitution in the components on the equilibrum of binary solutions, A., ii, 77.
additive compounds of nitrosodimethylaniline, A., ii, 78.
kinetics of reactions in mixtures of water and alcohol, A., ii, 307.
kinetics of reactions in heterogeneous systems; hydrolysis in non-homogeneous systems, A., ii, 307.
catalytic ester exchanges. I. Contribution to the theory of saponification, A., ii, 630.
hydrolysis of esters in heterogeneous systems, A., ii 688.
Kress, *K.*, action of certain poisons on the isolated small intestine of dogs and rabbits, A., ii, 847.
Kreutz, *Adolf*. See *Emil* **Erlenmeyer**, *jun.*
Krieger, *Albert*. See *Roland* **Scholl**.
Krimberg, *R.* See *Wladimir von* **Gulewitsch**.
Krische, *Paul*. See *Wilhelm* **Manchot**.
Kroch, *August*, tension of carbon dioxide in sea water and the reciprocal influence of the carbon dioxide of the sea and of the atmosphere, A., ii, 26.
Krsnjavi, *B.* See *Robert* **Luther**.
Krüger, *Friedrich*, application of the Wehnelt interrupter in the measurement of dielectric constants by Nernst's method, A., ii, 432.
Krüger, *Martin*, and *Alfred* **Schittenhelm**, amounts and origin of purine bases in human fæces. II., A., ii, 645.
Krüger, *Martin*, and *Julius* **Schmid**, estimation of uric acid and of purine bases in human urine, A., ii, 776.
Krüss, *Paul*, ultra-violet absorption of organic dyes, A., ii, 293.
Krug, *Otto*, amount of sodium salts naturally occurring in wine, A., ii, 864.
Krummacher, *Otto*, solubility and heat of solution of carbamide; energy equilibrium, A., i, 266.
Kuchenbecker, *Adolf*. See *Theodor* **Zincke**.
Kühling, [*Friedrich Theodor*] *Otto*, electrolysis of glycine, A., i, 417.
action of dilute nitric acid on guaiacolsulphonic acid, A., i, 888.
condensation products of alloxan with saturated ketones, A., i, 944.
Kühling, *Otto*, and *Franz* **Falk**, lactam formation from γ-lactones and the stability of the pyrrolidone nucleus, A., i, 372.
Kümmell, *Gottfried*, dissociation of ternary electrolytes, A., ii, 226, 502.
Küppers, *Ernst*. See *Heinrich* **Biltz**.
Küster, *Friedrich Wilhelm* [*Albert*], polysulphides. II., A., ii, 387.
Küster, *Friedrich Wilhelm*, [with *Georg* **Dahmer**], determination of molecular weight in solid solutions. IV. Vaporisation of isomorphous mixtures of *p*-dichlorobenzene and *p*-dibromobenzene, A., ii, 230.
solubility of barium sulphate, A., ii, 248.
Küster, *Friedrich Wilhelm*, [with **Franke** and *W.* **Geibel**], contact method for the manufacture of sulphuric acid, A., ii, 82.

Küster, *Friedrich Wilhelm*, *Max* **Grüters**, and *W.* **Geibel**, determination of the neutralisation point by conductivity measurement. II., A., ii, 55.

Küster, *Friedrich Wilhelm*, and *Eduard* **Heberlein**, polysulphides. I., A., ii, 156.

Küster, *Friedrich Wilhelm*, [with *Karl* **Koelichen**], polysulphides. III. Periodic phenomena during the electrolysis of polysulphides, A., ii, 698.

Küster, *Friedrich Wilhelm*, and *Siegmar* **Münch**, table for the preparation of normal solutions of hydrochloric acid according to the density, A., ii, 198.

density determinations with a pipette; adjustment of titrimetric solutions by volume weight, A., ii, 232.

attempts to prepare absolute nitric acid, A., ii, 243.

Küster, *Friedrich Wilhelm*, [with *Walter* **Würfel**], determination of molecular weights in solid solutions, A., ii, 80.

Küster, *William*, hæmatin, A., i, 622.

Küster, *William*. See also *Gustav von* **Hüfner**.

Kufferath, *August*, electrolytic estimation of copper, A., ii, 64.

Kuhara, *Mitsuru*, and *Yoshinori* **Kishi**, action of ammonia and of amines on chloral, A., i, 861.

Kuhtz, *E.* See *Robert* **Pschorr**.

Kullgren, *Carl Fredrik*, velocity of change in catalytic reactions, A., ii, 237.

Kunckell, *Franz* [*Eduard*], derivatives of 2:4-diketotetrahydroquinazoline, A., i, 382.

p-chloroacetylphenoxyacetic acid and ethyl *p*-chloroacetylphenylacetate, A., i, 646.

Kunckell, *Franz*, and *Wilhelm* **Theopold**, bromotetrahydroquinoline, A., i, 297.

Kunkel, *Adam Josef*, so-called normal arsenic, A., ii, 542.

Kurbatoff, *W. A.*, structure of hardened steel, A., ii, 392.

Kurnakoff, *Nicolai S.*, new form of pyrometer, A., ii, 10.

Kurnakoff, *Nicolai S.*, and *N. J.* **Stepanoff**, alloys of magnesium with tin and with lead, A., ii, 710.

Kurrein, *Herbert*, action of ethyl oxalic chloride on ethyl sodiomalonate, A., i, 413.

Kutsch, *William Adelbert*. See *Ernst Hermann* **Riesenfeld**.

Kutscher, *Friedrich* [oxidation of nucleic acids], A., i, 621.

Kutscher, *Friedrich*, and *Alfred* **Lohmann**, end-products of pancreatic autolysis. IV., A., ii, 466.

Kutscher, *Friedrich*, and *Martin* **Schenck**, oxidation of proteids with calcium permanganate. II. Oxidation of gelatin, A., i, 251.

oxidation of thymonucleic acid with calcium permanganate, A., i, 621.

oxaluria, A., ii, 104.

Kutscheroff, *M.*, the vanillin reaction for the detection of ketones, A., ii, 771.

Kyas, *Otto*. See *Johann* **Vañha**.

L.

Laan, *F. H. van der*. See *Arnold Frederik* **Holleman**.

Laar, *Johannes Jacobus van*, verification of a recent equation of Van der Waals, A., ii, 148.

some phenomena which can occur in the case of partial miscibility of two liquids, one of them being anomalous, especially water, A., ii, 234.

concentrated solutions, A., ii, 234.

abstract and concrete conceptions (osmotic pressure and thermodynamic potential), A., ii, 374.

exact expression for the so-called molecular change of critical temperature, A., ii, 434.

different forms and transformations of the boundary curves in the case of partial miscibility of two liquids, A., ii, 507.

exact expression for the course of the spinodal curves and of their plait points for all temperatures, in the case of mixtures of normal substances, A., ii, 507.

shape of the plait-point curve for mixtures of normal substances, A., ii, 507.

molecular rise of the lower critical temperature of a binary mixture of normal components, A., ii, 675.

thermodynamic potential and its application to problems of chemical equilibrium, A., ii, 683.

Labbé, *Henri*, and *E.* **Morchoisne**, elimination of urea in healthy subjects, A., ii, 102.

Labergerie, cultivation of *Solanum Commersonii* at Verrières (Vienne, France), A., ii, 756.

Labhardt, *Hans*. See *Karl* **Reinking**.

Laborde, *J.* [*B. Vincent*], estimation of glycerol in wines, A., ii, 768.

Lacroix, [*Antoine François*] *Alfred*, basic magnesium carbonates from the volcanic eruption at Santorin in 1866, A., ii, 464.
occurrence of Redonda phosphate in Martinique, A., ii, 536.
Lacroix, *Hunkiarbéyendian*, quinine formates, A., i, 716.
Lacy, *Burritt S.* See *Theodore William* **Richards**.
Ladenburg, *Albert*, atomic weight of iodine, A., ii, 310.
Ladenburg, *Albert*, and *Walter* **Herz**, benzylmalimides, A., i, 272.
Ladner, *Gustav.* See *Julius* **Schmidt**.
Laemmel, *Rudolf*, atomic heat of solid elements, A., ii, 300.
Laer, *Henri van*, non-inverting yeasts, A., ii, 547.
Lagatu, *H.*, physico-chemical analysis of soils, A., ii, 557.
classification and nomenclature of arable soils according to their mineral constitution, A., ii, 758.
Lagerlöf, *Daniel*, thermochemical studies, A., ii, 76, 677.
Lagodzinski, *Kasimir*, action of a mixture of glacial acetic acid and hydriodic acid on quinones, A., i, 601.
Lajoux, *Henri*, chemical analysis and cryoscopy of milk, A., ii, 559.
Lake, *Hilda.* See *Eric* **Drabble**.
Laloue, *G.* See *Eugène* **Charabot**.
Lambert, *P.*, absorption spectrum of manganous salts, A., ii, 638.
Lambrecht, *Rudolf*, and *Hugo* **Weil**, a colourless hydrochloride of rosaniline, A., i, 97.
[colourless salts of triphenylcarbinol and diphenylcarbinol], A., i, 128.
malachite-green and crystal-violet, A., i, 243.
Landau, *Anastazy*, alkalinity of blood, A., ii, 330.
Landenberger, *Albert.* See *Conrad* **Willgerodt**.
Lando, *Max.* See *George Bell* **Frankforter**.
Lando, *Towie Gutmann.* See *Paul* **Pfeiffer**.
Landolt, *Hans* [*Heinrich*], addendum to the Sixth Report of the Committee [of the German Chemical Society] for fixing atomic weights, A., ii, 308.
Landolt, *Hans*, *Wilhelm* **Ostwald**, and *Otto* **Wallach**, Sixth Report of the Committee [of the German Chemical Society] for fixing atomic weights, A., ii, 155.
Landrieu, *Philippe*, heat of formation of the oximes, A., ii, 301.
Landrieu, *Philippe*, equilibrium between acetone and hydroxylamine hydrochloride, A., ii, 445.
thermochemistry of phenylhydrazones, A., ii, 628.
Landsberger, *Willy*, estimation of glycerol by the extraction method, A., ii, 558.
Landsiedl, *Anton*, determination of melting point, A., ii, 626.
Landsiedl, *Anton.* See also *Max* **Bamberger**.
Landsteiner, *Karl*, theory of colloids, A., ii, 447.
Lane, *Joseph Henry.* See *Raphael* **Meldola**.
Lang, *Hugo*, condensation of phenylacetone with phenanthraquinone, A., i, 292.
o-benzoylbenzoic acid, A., i, 895.
Lang, *Julius*, chemical lecture experiments, A., ii, 810.
Lang, *William Robert*, and *Charles Macdonald* **Carson**, the interaction of hydrogen sulphide and sulphur dioxide, P., 158.
Langbeck, *K.* See *Friedrich* **Hoffmann**.
Lange, *W.* See *Walther* **Borsche**.
Langensiepen, *Ernst.* See *Emil* **Knoevenagel**.
Langer. See *R.* **Segalle**.
Langevin, *P.*, the ions of the atmosphere, A., ii, 141.
Langevin, *P.*, and *M.* **Moulin**, registration of the ions in the atmosphere, A., ii, 141.
Langguth, *St.*, reduction of aromatic amino-acids to the corresponding alcohols, A., i, 593.
Langley, *John N.*, and *Rudolf* **Magnus**, movements of the surviving intestine, A., ii, 733.
Langmuir, *Arthur C.*, estimation of rosin in shellac, A., ii, 214.
Langstein, *Leo*, the carbohydrate group in proteids, A., i, 496.
carbohydrates from serum globulins. III., A., i, 555.
Lanin, *Theodor.* See *Carl Adam* **Bischoff**.
Laprade, *F.* See *Jules* **Aloy**.
Lapworth, *Arthur.* See *Douglas Anderson* **Bowack**.
Laqueur, *Ernst*, action of the rennet ferment on milk and casein, A., ii, 848.
Larguier des Bancels. See **Bancels**.
Lassar-Cohn, tap for use with alkaline liquids, A., ii, 631.
Lassar-Cohn and *Fritz* **Schultze**, action of potassium hypochlorite, hypobromite, and hypoiodite on dipotassium salicylate, A., i, 893.

Lasserre, *A.*, action of acetaldehyde and acetone on mercuric acetate, A., i, 740.

Lattey, *Robert Tabor*, mutual solubilities of diethylamine and water, A., i, 747.

Launoy, *L.*, toxicity of amylene *aβ*-chlorohydrin, A., ii, 49.

Lauterwald, *Franz*, variations in the non-fatty solids of milk resulting from interrupted milking, A., ii, 773.

Lavaczeck, *Paul*. See *Julius* **Tafel**.

Lavalle, *Francisco P.*, estimation of sugar with Fehling's solution, A., ii, 558.

Lavaux, *James*, action of methylene chloride and aluminium chloride on toluene, A., i, 43.

separation of the three dimethylanthracenes obtained in the action of methylene chloride and aluminium chloride on toluene, A., i, 125.

action of acetylene tetrabromide and aluminium chloride on toluene, A., i, 640.

constitution of *as*-di-*p*-tolylethane, 2:7:9:10-tetramethylanthracene dihydride, and 2:7-dimethylanthracene, A., i, 698.

Laveran, *Charles Louis Alphonse*, treatment of trypanosomiasis by arsenious acid and "trypanroth," A., ii, 272, 408.

Law, *Herbert Drake*, electrolytic oxidation of aliphatic aldehydes, T., 198; P., 7; discussion, P., 8.

Law, *Herbert Drake*, and *Frederick Mollwo* **Perkin**, electrolytic oxidation of the hydrocarbons of the benzene series. I. Hydrocarbons containing the methyl group, A., i, 40.

electrolytic oxidation of hydrocarbons of the benzene series. Part II. Ethylbenzene, cumene, and cymene, A., i, 761.

electrolytic analysis of antimony, A., ii, 767.

Law, *Herbert Drake*. See also *Alfred Chaston* **Chapman**.

Lawroff, *D.*, peptic and tryptic digestion of proteids. II., A., ii, 178.

Lawson, *Andrew Cowper*, orbicular gabbro from California, A., ii, 178.

Leach, *Albert E.*, composition of turmeric, A., ii, 127.

Leach, *Albert E.*, and *Hermann C.* **Lythgoe**, estimation of ethyl and methyl alcohols in mixtures by the immersion refractometer, A., ii, 655.

Leach, *Frederick Peacock*, limonene nitrosocyanides and their derivatives, T., 413; P., 117.

Leather, *John Walter*, estimation of small quantities of iron, A., ii, 422.

Lebach, *Gustav*. See *Martin* **Freund**.

Lebeau, *Paul* [*Marie Alfred*], employment of metalammonium compounds in organic chemistry; preparation of fatty hydrocarbons, A., i, 401.

physical properties of propane, A., i, 501.

employment of metalammonium compounds in organic chemistry; formation of primary amines, A., i, 512.

Lebeau, *Paul*. See also *Henri* **Moissan**.

Le Blanc, *Max* [*Julius Louis*], electrolysis with alternating currents; passivity of metals, A., ii, 137.

Le Blanc, *Max*, and *Carlo* **Cantoni**, the Castner mercury process of obtaining chlorine and alkali, A., ii, 696.

Lecanu. See **Allain Lecanu**.

Lecarme, *Jean*. See *Gabriel* **Bertrand**.

Le Chatelier, *Henry* [*Louis*], effect of nitrogen on steel, A., ii, 639.

Leclerc du Sablon, carbohydrate reserves of evergreen trees, A., ii, 605.

Ledien, *Franz*. See *Oskar* **Drude**.

Ledru. See *Paul* **Freundler**.

Leduc, [*Sylvestre*] *Anatole*, precision attained in the determination of the atomic weights of hydrogen and nitrogen, A., ii, 310.

diamagnetism of bismuth, A., ii, 371.

Leeden, *Rudolf van der*. See *Otto* **Diels**.

Leenhardt, *Ch.*, velocity of crystallisation of supersaturated solutions, A., ii, 630.

Leent, *Frederik Hendrik van*, the reactions concerned in the estimation of the iodine value, A., ii, 124.

Leersum, *P. van*, microchemical analysis of Cinchona barks, A., ii, 620.

Lees, *Frederic Herbert*. See *Frederick Belding* **Power**.

Lefèvre, *Jules*, development of green plants in light, in absence of carbon dioxide, in an artificial soil containing amides, A., ii, 648.

Leffmann, *Henry*, detection of asaprol [naphthol-β-sulphonate]; estimation of methyl alcohol in presence of formaldehyde, A., ii, 864.

Léger, *Eugène*, methylnataloe-emodin and nataloe-emodin, A., i, 532.

Lehmann, *Hans*. See *Hermann von* **Tappeiner**.

Lehmann, *Martin*. See *Arthur* **Hantzsch**.

Lehmann, *Paul* (Erlangen), and *Hermann* **Stadlinger**, table for the rapid calculation of the original extractive matter of beer wort, A., ii, 123.

Lehmann, *Paul* (Heidelberg). See *Friedrich* **Krafft**.

Lehner, *Alfred*. See *Fritz* **Ullmann**.

Leishman, *William Boog*, stimulins, A., ii, 844.

Leishman, *William Boog*, *William Sandilands* **Harrison**, *Arthur Briton* **Smallman**, and *Forbes Mason Grantt* **Tulloch**, blood changes following anti-typhoid inoculation, A., ii, 599.

Lemcke, *N.* See *Leo W.* **Pissarjewsky.**

Lemmermann, *Otto*, influence of different amounts of soil on the development of plants, A., ii, 413.

Lemoult, *Paul* [*Aimé Louis*], reversion of some secondary cyclic amines, A., i, 48.

action of phosphorus pentachloride on tertiary cyclic amines; synthesis of dyes and formation of phosphorus, A., i, 194.

general relations between the heats of combustion of organic compounds and their constitutional formulæ; calculation of the heats of combustion. Part II., A., ii, 441.

Lemoult, *Paul.* See also **Curtis.**

Lenard, *Philipp* [*Eduard Anton*], emission of light from the vapours of alkali metals and their salts, and the centres of this emission, A., ii, 565.

Lenton, *Walter Henry*, assay of opium and its preparations, A., ii, 491.

Lenzner, *Alfred.* See *Hans* **Stobbe.**

Leo, *Hans*, gastric digestion of proteids, A., ii, 838.

Leonhardt, *Richard.* See *August* **Michaelis.**

Leontowitsch, *A. W.*, sodium hexatungstate, A., ii, 325.

Lepel, *Franz von*, oxidation of atmospheric nitrogen by aid of the electric arc, A., ii, 581.

Lepetit, *Roberto*, condensation product from hæmatoxylin and formaldehyde, A., i, 148.

Lépine, *Raphael*, and **Boulud**, influence of local temperature on glycolysis in the capillaries, A., ii, 46.

reduction of oxyhæmoglobin, A., ii, 403.

distribution of saccharine matters in the plasma and in the blood corpuscles, A., ii, 642.

glycuronic acid of blood, A., ii, 730.

Lerch, *F. von*, thorium X and the induced thorioactivity, A., ii, 790.

Leroux, *Henri*, decahydro-β-naphthol and octahydronaphthalene, A., i, 278.

decahydro-β-naphthyl ketone and decahydro-β-naphthylamine, A., i, 601.

Le Roux, *P.*, action of very low temperatures on the phosphorescence of certain sulphides, A., ii, 131.

Lesage, *L.* See *Robert* **Fosse.**

Lesch, *Karl*, and *Anton* **Michel**, oxidation of octaglycol isobutyrate, A., i, 403.

Léser, *Georges.* See *Philippe* **Barbier.**

Lespieau, *Robert*, β-bromobutyric acid, A., i, 9.

action of hydrogen cyanide on epiethylin (ethyl glycide ether), A., i, 255.

ethoxycrotonic acid and ethylerythritic acid, A., i, 319.

tetracarbon hydroxy-acids obtained by the action of hydrogen cyanide on epichlorohydrin, epibromohydrin, and epiethylin (ethyl glycide ether), A., i, 406.

synthesis of the lactone of erythric acid, A., i, 566.

cryoscopic measurements with hydrogen cyanide, A., ii, 303.

Lespieau, *Robert*, and *G.* **Chavanne**, liquefaction of allene and allylene, A., i, 401.

Le Sueur, *Henry Rondel*, the action of heat on α-hydroxycarboxylic acids. Part II. α-Hydroxymargaric acid, α-hydroxypalmitic acid, α-hydroxypentadecylic acid, and α-hydroxymyristic acid, T., 1888; P., 285.

Letsche, *Eugen.* See *Otto* **Dimroth.**

Leuba, *Auguste F.*, action of oxalic acid on lead ferrocyanide, A., i, 422.

analysis of copper ferrocyanide, A., ii, 556.

Leuchs, *Hermann*, synthesis of hydroxypyrrolidinecarboxylic acids (hydroxyprolines), A., i, 545.

Leuner, *Karl.* See *Hans* **Stobbe.**

Levene, *Phoebus A.*, preparation and analysis of nucleic acids. VII., A., i. 105.

hydrolytic cleavage of proto-albumose, A., i, 252.

preparation and analysis of nucleic acids. VIII. On the nucleic acid of the spleen, A., i, 847.

end-products of pancreatic autolysis, A., ii, 732.

Levene, *Phoebus A.* See also *John A.* **Mandel.**

Levi, *Mario Giacomo*, passivity of nickel, A., ii, 591.

Levi, *Mario Giacomo*, and *V.* **Bettoni**, function of the catalyst in the Deacon process for the manufacture of chlorine, A., ii, 515.

Levi, *Mario Giacomo*, and *Mario* **Voghera**, electrolysis in acetone and in pyridine, A., i, 572.

Levi, *Mario Giacomo.* See also *Raffaelo* **Nasini.**

Levier, *Alex.* See *Paul* **Dutoit**.
Levin, *Max*, gold-thallium alloys, A., ii, 462.
alloys of gold and nickel, A., ii, 532.
Levin, *Max*, and *Gustav* **Tammann**, manganese-iron alloys, A., ii, 822.
Levin, *Max.* See also *Rudolf* **Ruer**.
Levites, *S. A.*, deaminoalbumins, A., i, 104.
Lévy, *Albert*, and *Adrien* **Pécoul**, estimation of carbon monoxide in confined atmospheres, A., ii, 203.
Levy, *Alfred Goodman*, estimation of chloroform vapour in air, A., ii, 121.
Levy, *Leonard Angelo*, and *Henry Arnott* **Sisson**, some new platinocyanides, P., 305.
Levy, *Walter.* See *Arthur* **Rosenheim**.
Lewis, *Gilbert Newton*, hydration in solution, A., ii, 509.
autocatalytic decomposition of silver oxide, A., ii, 578.
Lewis, *Reginald J.* See *Cecil Napier* **Hake**.
Lewis, *William Henry.* See *Frederick Daniel* **Chattaway**.
Lewkowitz, *Hermann.* See *Rudolf Friedrich* **Weinland**.
Ley, *Heinrich*, internally complex metallic salts [copper glycine], A., i, 175.
mercury nitroform and the constitution of salt solutions, A., i, 316.
colloidal copper oxide, A., ii, 524.
Ley, *Heinrich*, and *G.* **Wiegner**, metastable states in reactions between gaseous and solid substances, A., i, 749.
Leys, *Alexandre*, reactions of certain ethylenic compounds with mercuric acetate in glacial acetic acid solution; mercury resorcinolmercuriacetate and phloroglucinoltrimercuriacetate, A., i, 433.
action of aldehydes on mercuric oxide in alkaline solution; distinction between acetaldehyde and formaldehyde, A., ii, 655.
L'Hôte, *Louis*, use of nickel vessels in laboratories, A., ii, 608.
Lichtenstein, *Ludwig Anton.* See *Jacobus Henricus van't* **Hoff**.
Lichtenstern, *Richard*, condensation of synthetical isovaleraldehyde with formaldehyde, A., i, 509.
Lidholm, *Hj.*, separation of silver from lead, A., ii, 204.
Lieben, *Adolf*, action of dilute acids on pinacones, A., i, 167.
Liebenoff, *Carl*, dissociation of electrolytes, A., ii, 499.
Liebermann, *Carl* [*Theodor*], and *G.* **Häse**, the pyrrole-blue group, A., i, 841.
Liebermann, *Carl*, and *Simon* **Lindenbaum**, mesophenyl derivatives of anthracene, A., i, 522.
Liebermann, *Carl*, and *Leonhard* **Mamlock**, action of bromine on the anthranols, A., i, 521.
iodo-hydriodo-compounds of non-nitrogenous derivatives of anthraquinone, A., i, 531.
Liebermann, *Leo*, estimation of fat, A., ii, 774.
Liebermann, *Leo*, and *Paul* **Liebermann**, is the presence of a catalase necessary for the guaiacum reaction? A., i, 956.
Liebig, *Hans von*, condensation of benzil with resorcinol. I. Non-fluorescent substances, A., i, 781.
Liesche, *Otto.* See *Georg* **Lockemann**.
Lilienfeld, *Maurice*, chemotropism of the root, A., ii, 474.
Lilienthal, manurial value of molasses as compared with ammonium sulphate and 40 per cent. potassium salts, A., ii, 650.
Lindemann, *Ludwig*, Bence-Jones proteid, A., ii, 186.
Lindenbaum, *Simon.* See *Carl* **Liebermann**.
Lindenberg, *Willy.* See *Conrad* **Willgerodt**.
Linder, *Ernest*, and *Harold* **Picton**, solution and pseudo-solution. Part IV., T., 1906; P., 240.
Lindet, *Léon* [*Gaston Aimé*], stimulating and paralysing influences of certain substances in the production of rust, A., ii, 36.
Lindet, *Léon*, and *Louis* **Ammann**, influence of bran on the estimation of gluten and on the suitability of flour for bread-making, A., ii, 780.
Lindet, *Léon*, and *P.* **Marsais**, comparative production of alcohol and carbon dioxide during fermentation, A., ii, 109.
Lindgren, *Waldemar*, and *William Francis* **Hillebrand**, minerals from Arizona, A., ii, 96.
Ling, *Arthur Robert*, and *Theodore* **Rendle**, volumetric estimation of reducing sugars, A., ii, 487.
Lingle, *David Judson*, restorers of the cardiac rhythm, A., ii, 835.
Linne, *Bruno.* See *Balthasar* **Pfyl**.
Lion, *Gaston.* See *George F.* **Jaubert**.
Lipman, *Jacob G.* See *Edward Burnett* **Voorhees**.
Lipp, *Andreas*, and *Eduard* **Widnmann**, action of formaldehyde on 1:2-dimethyl-Δ^2-tetrahydropyridine, A., i, 610.

Lipp, *Andreas,* and *Eduard* **Widnmann,** action of formaldehyde on 1:2-dimethyl-Δ^2-tetrahydropyridine. II. 3-Acetyl-1-methylpiperidine(1-methyl-3-piperyl methyl ketone), A., i, 662.

Lippert, *Walter,* influence of atmospheric moisture on the oxygen absorption of oils. III., A., i, 258.

Lippmann, *Edmund Oskar von,* the occurrence of vanillin, A., i, 66.

Lippmann, *Eduard,* and *Rodolfo* **Fritsch,** condensation of aldehydes with ketones, A., i, 443.

Lipschitz, *Alfred,* and *Rudolf von* **Hasslinger,** action of dilute acids on ferrous sulphide, A., ii, 253.

Lipschitz, *Alfred.* See also *Guido* **Goldschmiedt.**

Litterer, *Gustave,* oil derived from leaves and stems of the sweet orange (*Citrus Aurantium*), A., i, 802.

oil derived from the leaves and stems of the lemon tree (*Citrus Limonum*), A., i, 802.

Litterscheid, *Franz M.,* action of methylamine and of dimethylamine on furfuraldehyde, A., i, 76.

Litterscheid, *Franz M.* See also *Ernst* **Schmidt.**

Littlebury, *William Oswald.* See *Robert Howson* **Pickard.**

Lloyd, *S. J.,* tribromophenol bromide: its detection, estimation, rate of formation, and reaction with hydriodic acid, A., i, 277.

estimation of phenol, A., ii, 209.

Lobello, *R.,* Bettendorf's test for arsenic, A., ii, 763.

Lobello, *R.* See also *Ezio* **Comanducci.**

Lobry de Bruyn. See **Bruyn.**

Locke, *Frank Spiller,* action of potassium and sodium on the indirect excitability of muscle, A., ii, 270.

Lockemann, *Georg,* detection of arsenic by means of the Marsh apparatus, A., ii, 353.

catalytic decomposition of arsenic hydride, A., ii, 386.

Lockemann, *Georg,* and *Otto* **Liesche,** preparation of acraldehyde by the boric acid method, A., i, 570.

Lockhart, *L. B.* See *Charles* **Baskerville.**

Lockyer, (*Sir*) *Joseph Norman,* and *F. E.* **Baxandall,** enhanced lines of titanium, iron, and chromium in the Fraunhoferic spectrum, A., ii, 69.

the group IV. Lines of silicon, A., ii, 129.

arc spectrum of scandium and its relation to celestial spectra, A., ii, 392.

Locquin, *René,* α-ketonic acids and esters (homopyruvic compounds), A., i, 11.

oximes and dioximes of α-diketones, A., i, 19.

α-diketones, A., i, 20.

Locquin, *René.* See also *Louis* **Bouveault.**

Loeb, *Adam.* See *Julius* **Baer.**

Loeb, *Jacques,* antagonism of salts, A., ii, 400.

Loeb, *Leo,* blood coagulation. VI., A., ii, 330.

Loeb, *Morris,* crystallisation of sodium iodide from alcohols, A., ii, 634.

Loeb, *Oswald,* action of alcohol on the heart of warm-blooded animals, A., ii, 471.

Loebl, *Emmo.* See *Rudolf* **Scheuble.**

Löffler, *Karl,* β-coniceine, A., i, 917.

Löffler, *Karl,* and *M.* **Kirschner,** derivatives of 2-picolyl- and of 2-picolylmethyl-alkines. III., A., i, 938.

Loeffler, *Peter.* See *Heinrich* **Kiliani.**

Löhlein, *Walter,* Volhard's titrimetric method for the estimation of pepsin and trypsin, A., ii, 780.

Löhnis, *F.,* nitrification and denitrification in arable soil, A., ii, 109.

decomposition of calcium cyanamide, A., ii, 412.

nitrogen bacteria, A., ii, 601.

changes in the nitrogen in soils, A., ii, 854.

Loevenhart, *Arthur Solomon,* catalytic decomposition of hydrogen peroxide, A., ii, 335.

Loew, [*Carl Benedict*] *Oscar,* flowering of bamboo, A., ii, 344.

poisonous action of sodium fluoride on plants, A., ii, 606.

lime requirements of plants, A., ii, 751.

lime requirements of various vegetable organs, A., ii, 751.

lime manuring, A., ii, 760.

Loew, *Oscar,* and *Keijirō* **Asō,** different degrees of availability of plant nutrients, A., ii, 347.

Löw-Beer, *Oscar.* See *Heinrich* **Goldschmidt.**

Loewi, *Otto,* and *Nathaniel Henry* **Alcock,** physiology of the kidney. IV. Mechanism of salt diuresis, A., ii, 739.

Loewi, *Otto, W. M.* **Fletcher,** and *V. E.* **Henderson,** physiology of the kidneys. III. Mechanism of caffeine diuresis, A., ii, 739.

Loewi, *Otto,* and *Hans* **Meyer,** action of synthetical substances allied to adrenaline, A., ii, 846.

Loewi, *Otto.* See also *V. E.* **Henderson.**

Loewy, *Adolf*, and *Carl* **Neuberg**, diamines, A., i, 158.
cystinuria. I., A., ii, 103.
Loewy, *Adolf*, and *Hermann von* **Schrötter**, investigations on the circulation in man, A., ii, 401.
Lohmann, *Alfred*. See *Friedrich* **Kutscher**.
Lohmann, *C. E. Julius*, extraction apparatus for large quantities of vegetable powders, A., ii, 309.
Lohmann, *Johann*. See *Alexander* **Gutbier**.
Lohnstein, *Theodor*, estimation of fat, lactose, and proteids in milk, A., ii, 773.
Lohse, *Oscar*. See *Ferdinand Willy* **Hinrichsen**.
London, *E. S.*, chemistry of digestion. I., A., ii, 730.
London, *E. S.*, and *A. Th.* **Sulima**, chemistry of digestion in animals. II. Digestion of proteids in the alimentary tract, A., ii, 838.
Long, *John Harper*, specific rotation of salts of casein, A., i, 498.
Longinescu, *George G.*, polymerisation in the liquid and solid states, A., ii, 79.
Lossen, *Wilhelm* [*Clemens*], preparation of *o*-chlorophenol, A., i, 126.
Lottermoser, [*C. A.*] *Alfred*, absorption compounds of colloidal silver and other inorganic colloids with organic colloids, A., ii, 318.
colloidal salts. I. Silver salts, A., ii, 586.
Louise, *Émile* [*Alphonse Camille*], and *F.* **Moutier**, toxicology of mercury diphenyl, A., ii, 601.
Love, *Andrew*, leucocytosis of typhus fever, A., ii, 338.
Lovén, *Johan Martin*, optically active α-phenylethylamines (α-aminoethylbenzenes), A., i, 875.
Lowe, *William Foulkes*, accuracy of the dry assay of galena in an iron crucible, A., ii, 205.
Lowry, *Thomas Martin*, the design of gas-regulators for thermostats, T., 1030; P., 181; discussion, P., 181.
dynamic isomerism, A., ii, 16.
application to electrolytes of the hydrate theory of solutions, A., ii, 686.
Lowry, *Thomas Martin*. See also *William Robert* **Bousfield**.
Lucas, *Richard*, absorption of oxygen by platinum, A., ii, 396.
contraction exhibited by certain substances on ignition, A., ii, 574.
the contact process of manufacturing sulphuric acid, A., ii, 701.
Lucas, *Richard*. See also *Guido* **Bodländer** and *Erich* **Müller**.
Lucchèse, *Louis*, rapid estimation of silicon in ferrosilicon, A., ii, 118.
analysis of ferrosilicons; use of sodium peroxide in platinum crucibles, A., ii, 119.
Lüthje, *Hugo*, formation of sugar from proteid, A., ii, 99.
Luginin, *Wladimir Fedorowitsch*, latent heat of vaporisation of carvacrol and anethole, A., ii, 801.
Lukin, *Mstislaw*, sterilisation of milk with hydrogen peroxide, with special reference to Budde's process, A., ii, 647, 758.
Luksch, *Alfred*, condensations of *o*-aldehydocarboxylic acids with ketones, A., i, 68.
Lumière, *Auguste*, *Louis* **Lumière**, and *Henri* **Barbier**, antipyrylsemicarbazide, A., i, 475.
acetylation in aqueous solutions, A., i, 642.
Lumière, *Auguste*, *Louis* **Lumière**, and *J.* **Chevrotier**, preparation and properties of protoplasmic extracts of blood corpuscles, A., ii, 642.
Lumière, *Auguste*, *Louis* **Lumière**, and *F.* **Perrin**, action of dicyanodiamide on the primary aromatic amine hydrochlorides, A., i, 249.
aromatic nitrocarbonic esters and their reduction products, A., i, 588.
action of chloro-formodiethylamide on nitrophenols and reduction of the corresponding derivatives, A., i, 588.
Lumière, *Auguste*, *Louis* **Lumière**, and *Alphonse* **Seyewetz**, hyposulphites of aromatic bases, A., i, 157.
composition of gelatin impregnated with potassium dichromate and rendered insoluble by subsequent exposure to light, A., i, 847.
composition of gelatin rendered insoluble by exposure to light in presence of chromic acid or chromates, A., i, 848.
anti-oxidation of solutions of sodium sulphite, and anti-oxidising agents, A., ii, 379.
decomposition and preservation of sodium hyposulphite as anhydrous powder and in aqueous solution, A., ii, 706.
Lumsden, *John Scott*, the reduction products of anisic acid, T., 87; P., 14.
the physical properties of heptoic, hexahydrobenzoic, and benzoic acids and their derivatives, T., 90; P., 14.

Lunge, *Georg*, theory of the lead chamber process, A., ii, 157.
estimation of combined sulphuric acid by the processes of Lunge and of Silberberger, A., ii, 350.
assay of concentrated nitric acids by the specific gravity, A., ii, 651.

Lunge, *Georg*, and *Ernst* **Berl**, reactions between nitric oxide and oxygen or atmospheric air, A., ii, 84.

Lunge, *Georg*, and *Hermann* **Grossmann**, Parr's method for estimating the heat of combustion, A., ii, 628.

Lunt, *Joseph*, spectrum of silicon; spectrum of fluorine, A., ii, 782.

Lusk, *Graham*, and *Arthur R.* **Mandel**, diabetes mellitus, A., ii, 187.

Lust, *Franz Alexander*, anti-substances against crotin in the normal organism, A., ii, 48.

Lustig, *Fritz*. See *Wilhelm* **Prandtl**.

Luther, *Robert* [*Thomas Diedrich*], the unit of combining weights, A., ii, 448.
chemical transfer of metallic potentials, A., ii, 668.

Luther, *Robert*, and *Francis Joseph* **Brislee**, anodic P.D.-current curve for hydrochloric acid at platinum electrodes, A., ii, 135.

Luther, *Robert*, and *B.* **Kranjavi**, complex compounds of carbonic acid with heavy metals, A., ii, 705.

Luther, *Robert*, and *George Victor* **Sammet**, chemical and electrical examination of the equilibria: $HIO_3 + 5HI \rightleftarrows 3I_2 + 3H_2O$ and $HBrO_3 + 5HBr \rightleftarrows 3Br_2 + 3H_2O$, A., ii, 508.

Luther, *Robert*, and *Fritz* **Weigert**, reversible photochemical reactions in homogeneous systems; anthracene and dianthracene. II., A., ii, 785.

Luttringer, *Armand*. See *Edmond Emile* **Blaise**.

Lutz, *L.*, leucine and tyrosine as sources of nitrogen for plants, A., ii, 276.
comparative assimilability of ammonium salts, amides, amines, and nitriles, A., ii, 548.

Lutz, [*Jacob*] *Oskar*, Giustiniani's benzylmalimide, A., i, 191.

Lutz, *Oskar*, and *A.* **Tschischikoff**, indirect estimation of carbon dioxide in salts, A., ii, 203.

Lythgoe, *Hermann C.*, optical properties of castor oil, cod-liver oil, neatsfoot oil, and a few essential oils, A., ii, 619.

Lythgoe, *Hermann C.* See also *Albert E.* **Leach**.

M.

Maar, *Vilh.* See *Christian* **Bohr**.

Maass, *Emil*, reduction of metanicotine with sodium and absolute alcohol, A., i, 543.

Mabery, *Charles Frederic*, and, in part, *O. H.* **Palm** and *Otto J.* **Sieplein**, composition of petroleum. I. Hydrocarbons in Ohio Trenton limestone petroleum. II. Hydrocarbons in Canadian petroleum with high boiling points. III. Hydrocarbons in Santa Barbara crude oil. IV. Separation of solid paraffin hydrocarbons from petroleum without distillation. V. The solid paraffin hydrocarbons that collect in oil wells in Pennsylvania. VI. Composition of commercial paraffin. VII. Composition of commercial vaseline, cosmoline, and similar products, A., i, 313.

Macallum, *Archibald Byron*, distribution of potassium in animal and vegetable cells, A., ii, 270.
the silver reaction in animal and vegetable tissues, A., ii, 736.

McBain, *James W.*, dissociation of cadmium iodide, A., ii, 371.

McCabe, *Charles R.*, gravimetric estimation of sulphur in iron and steel, A., ii, 761.

McCandlish, *Douglas*. See *Julius Berend* **Cohen**.

McClelland, *John A.*, secondary radiation, A., ii, 495.
secondary radiation (Part II.) and atomic structure, A., ii, 496.

McClelland, *W. H.* See *Harry Monmouth* **Smith**.

MacConkey, *Alfred*, lactose fermenting bacteria in fæces, A., ii, 601.

McCoy, *Herbert Newby*, radioactivity as an atomic property, A., ii, 366.

McCrae, *John*, analyses of some animal excrements, A., ii, 348.

McCrudden, *Francis H.* See *J. E.* **Goldthwait**.

Macdonald, *John Smyth*, basophil granules in nerve, A., ii, 405.
migration of potassium and the injury current, A., ii, 545.

McGowan, *George*, and *Robert Brooke* **Floris**, estimation of arsenic in fuels, A., ii, 354.

Mach, *Felix*, solubility of soil constituents, A., ii, 54.

Mach, *Felix*. See also *Th.* **Dietrich**.

Mache, *Heinrich*, radioactivity of the Gastein thermal springs, A., ii, 367.

Mache, *Heinrich*, and *Stefan* **Meyer**, radioactivity of the Bohemian mineral springs: Karlsbad, Marienbad, Teplitz-Schönau-Dux, and Franzensbad, and of St. Joachimsthal, A., ii, 498.
radioactivity of some springs in the Southern Viennese Thermal Zone, A., ii, 787.
McIntosh, *Douglas*, the basic properties of oxygen at low temperatures. Additive compounds of the halogens with organic substances containing oxygen, T., 784; P., 64, 120.
basic properties and the quadrivalence of oxygen, A., i, 254.
basic properties of oxygen: compounds of organic substances containing oxygen with nitric, sulphuric, and chlorosulphonic acids, A., i, 677.
McIntosh, *Douglas*. See also *Howard Turner* **Barnes** and *Bertram Dillon* **Steele**.
Mack, *Wilhelm Robert*, peptone in seeds, A., ii, 474.
McKenzie, *Alexander*, studies in asymmetric synthesis. III. The asymmetric synthesis of *l*-lactic acid. The optical activity of fermentation lactic acid, T., 1373; P., 224.
McKenzie, *Alexander*, and *Herbert Bryan* **Thompson**, racemisation phenomena during the hydrolysis of optically active menthyl and bornyl esters by alkali, T., 1004; P., 184.
Mackenzie, *Arthur Stanley*, deflexion of α-rays from radium and polonium, A., ii, 790.
Mackie, *W.*, estimation of carbon dioxide in air, A., ii, 355.
Macleod, *John James Rickard*, and *J.* **Dolley**, experimental glycosuria, A., ii, 544.
Macleod, *John James Rickard*, and *H. D.* **Haskins**, estimation of carbamates, A., ii, 123.
Madsen, *Thorvald*, toxins and antitoxins. IV., A., ii, 407.
Madsen, *Thorvald*, and *Hideyo* **Noguchi**, toxins and anti-toxins. II. and III., A., ii, 407.
Madsen, *Thorvald*, and *L.* **Walbum**, toxins and anti-toxins. I., A., ii, 407.
Madsen, *Thorvald*. See also *Svante August* **Arrhenius**.
Maetzke, *Georg*, digestion in dogs with artificial anus, A., ii, 837.
Maey, [*Hermann Rudolf*] *Eugen*, specific volume as the determining criterion of chemical combination in metal alloys. II., A., ii, 146.
Magnus, *Rudolf*, the surviving intestine, A., ii, 466.
Magnus, *Rudolf*. See also *John N.* **Langley**.
Magnus-Alsleben, *Ernst*, the toxicity of the normal intestinal contents, A., ii, 746.
Magri, *Giuseppe*. See *Ubaldo* **Antony**.
Mahler, *E. von*, detection of saccharin, A., ii, 127.
Mai, *Carl*, detection of arsenic in the ashes of cremated bodies, A., ii, 61.
estimation of arsenic in toxicology, A., ii, 763.
Mai, *Carl*, and *Hugo* **Hurt**, the evolution of hydrogen for Marsh's arsenic test, A., ii, 61.
electrolytic estimation of small quantities of arsenic, A., ii, 284.
Mai, *Carl*, and *C.* **Rath**, constituents of the fruits of *Copaifera Mopane*, A., ii, 851.
Maignon, *F.*, alcohol and acetone in the tissues and fluids of the body, A., ii, 406.
Maignon, *F.* See also *C.* **Vaney**.
Maigret, *E.*, solubility of lime and magnesia in solutions of sodium chloride with or without sodium hydroxide; application to the separation and estimation of the two substances, A., ii, 482.
Mailhe, *Alphonse*, catalytic action of finely divided metals, A., i, 501.
hydrogenation of aldoximes, A., i, 571.
reduction of ketoximes; new synthesis of amines, A., i, 635.
Mailhe, *Alphonse*. See also *Paul* **Sabatier**.
Maillard, *Louis C.*, scatoxyl and the origin of scatolic pigments, A., ii, 271.
Majone, *Vincenzo*, benzylphenyl salicylate, A., i, 278.
Makower, *Walter*, molecular weights of radium and thorium emanations, A., ii, 220.
method of transmission of the excited activity of radium to the cathode, A., ii, 792.
Malcolm, *John*, inter-relationship of calcium and magnesium excretion, A., ii, 271.
Malfitano, *G.*, the physical units of proteid matter and the part played by lime in their coagulation, A., i, 846.
the colloidal state, A., ii, 14.
electrolytic conductivity of colloidal solutions, A., ii, 72.
colloidal ferric chlorides, A., ii, 459.
Malkomesius, *Philipp*, and *Robert* **Albert**, humic acid, A., i, 119.

Malkomesius, *Philipp.* See also *Theodor* **Zincke.**
Mallinckrodt, *Edward, jun.*, and *Edward A.* **Dunlap**, meconic acid in the U.S.P. opium assay and certain meconates, A., ii, 777.
Malvezin, *Philippe*, diastases in wine diseases, A., ii, 749.
Mameli, *Efisio*, action of magnesium ethyl iodide on piperonaldehyde; new synthesis of isosafrole, A., i, 203.
ethylpiperonyl ether, A., i, 203.
Mameli, *Efisio*, and *Ezio* **Alagna**, action of magnesium propyl iodide on piperonaldehyde, A., i, 889.
Mamlock, *Leonhard.* See *Carl* **Liebermann.**
Manasse, *Albert.* See *Carl* **Neuberg.**
Manchot, *Wilhelm*, and *A.* **Kieser**, double silicides of aluminium, A., ii, 165.
Manchot, *Wilhelm*, and *Paul* **Krische**, action of ammonium sulphide on ketones and the conversion of thiopinacones into hydrocarbons, A., i, 142.
Mandel, *Arthur R.*, paralactic acid, A., ii, 182.
Mandel, *Arthur R.* See also *Graham* **Lusk.**
Mandel, *John A.*, and *Phoebus A.* **Levene**, distribution of glucothionic acid in the animal organism, A., ii, 736.
Manley, *John Job.* See *Victor Herbert* **Veley.**
Mann, *Guido*, use of the orcinol reaction for the detection of sugar in urine, A., ii, 487.
Mannheim, *Emil*, tetra-alkylarsonium bases, A., i, 758.
Manning, *Charlotte R.* See *Francis Gano* **Benedict.**
Manuelli, *Antonio.* See *Giuseppe* **Bruni.**
Maquenne, *Léon* [*Gervais Marie*], preparation of β-methylglucoside, A., i, 415.
apparatus to show the production of ozone during the combustion of coal gas, A., ii, 382.
Maquenne, *Léon*, and *Louis* **Philippe**, constitution of ricinine, A., i, 80.
Maquenne, *Léon*, and *Eugène* **Roux**, constitution, saccharification, and reversion of starch paste, A., i, 511.
Maragliano, *Giuseppe.* See *Angelo* **Angeli.**
March, *François.* See *Albin* **Haller.**
Marchadier, *L.*, indirect fermentative oxidations; course of the reaction in the oxidation of quinol, A., i, 342.
Marchese, *C.* See *Giovanni* **Romeo.**
Marchlewski, [*Paul*] *Léon* [*Theodore*], identity of phylloerythrin, bilipurpurin, and cholehæmatin, A., i, 500.
chlorophyll, A., i, 540.
the origin of cholehæmatin (bilipurpurin), A., i, 847.
Marchlewski, *Léon.* See also *H.* **Goldmann** and *Józef* **Buraczewski.**
Marckwald, *Eduard.* See *Fritz* **Frank.**
Marckwald, *Willy*, radiotellurium, A., ii, 159, 623.
actinium and emanium, A., ii, 497.
Marckwald, *Willy*, *Heinrich* **Greinacher**, and *Karl* **Herrmann**, radioactivity constant of radiotellurium, A., ii, 623.
Marckwald, *Willy*, and *Richard* **Meth**, amide formation between optically active acids and bases; the optically active α-aminoethylbenzenes, A., i, 272.
Marckwald, *Willy*, and *David M.* **Paul**, transformation of racemic compounds into the corresponding optically active forms, A., i, 285.
Marcusson, *Julius.* See *David* **Holde.**
Marek, *J.*, a simple gas pressure regulator, A., ii, 448.
Maret, *Al.* See *Otto C.* **Billeter.**
Margosches, *Benjamin Max*, estimation of alkalis in silicates by L. Smith's method, A., ii, 421.
use of benzene or toluene as indicator in iodometry, A., ii, 552.
Margosches, *Benjamin Max.* See also *Hugo* **Ditz.**
Marguery, *Félix*, unsymmetrical compounds of the malonic series, A., i, 507.
synthesis of aromatic β-ketonic esters, A., i, 527.
Marie, *Charles*, phosphorus acid derivatives of ketones and aldehydes, A., i, 17.
electrolytic reduction of the nitrocinnamic acids, A., i, 554.
Marino, *Luigi*, iridium sesquisulphate and its alums, A., ii, 43.
electromotive behaviour of molybdenum and its analogies with that of chromium, A., ii, 796.
Markovits, *Th. von.* See *Karl* **Auwers.**
Markownikoff, *Wladimir W.*, cyclic compounds; oxidation of 1-methyl-2-cyclohexanone, A., i, 141.
cyclic compounds; heptanaphthene (methylcyclohexane) and its derivatives, A., i, 760.
obituary notice of, T., 597.
Marquis, *Raymond*, nitration of methyl pyromucate; nitropyromucic acid, A., i, 77.

Marquis, *Raymond*, researches in the furan series, A., i, 224.
benzhydroxamic and dibenzhydroxamic acids, A., i, 524.
Marre, *Francis*, and *Fr.* **Stolle**, the active components of Fehling's solution, A., i, 738.
Marsais, *P.* See *Léon* **Lindet**.
Marsh, *James Ernest*, and *Robert de Jersey Fleming* **Struthers**, condensation of ketones with mercury cyanide, T., 1878; P., 248.
Marsh, *James Ernest*. See also *Robert de Jersey Fleming* **Struthers**.
Martin, *Charles James*, fibrin ferments in snake venom, A., ii, 411.
Martin, *Charles James*. See *E. H.* **Embley**.
Martin, *Geoffrey*, contribution to the theory of solution, A., ii, 234.
the condition which determines the chemical similarity of elements and radicles, A., ii, 693.
causes why an element often passes from one grade of combination to another without giving rise to intermediate compounds, A., ii, 809.
Martine, *Camille*. See *Albin* **Haller**.
Martinsen. See *Henri* **Moissan**.
Martinsen, *Haavard*, kinetics of the nitration reaction, A., ii, 149.
Martz, *Ernst*. See *Carl* **Graebe**.
Marx, *Wilhelm*. See *Richard* **Willstätter**.
Mascarelli, *Luigi*, double salts of iodoxy-derivatives with mercuric chloride and bromide, A., i, 869.
Maselli, *Concetto*, condensation of phenacylaniline with certain chloroethers, A., i, 776.
estimation of certain hydrazides, A., ii, 560.
Mason, *H. P.*, new filter tube, A., ii, 381.
Mason, *John Ernest*, and *John* **Wilson**, note on the incandescent mantle as a catalyst and its application to gas analysis, P., 296.
Massol, *Gustave*, thermal study of the acid function of pyruvic acid; influence of ketonic oxygen, A., ii, 302.
Massol, *L.* See *E.* **Boullanger**.
Massoulier, *Pierre*, ionisation in flames, A., ii, 140.
Mathews, *Albert Prescott*, nature of chemical and electrical stimulation. II. The tension coefficient of salts and the precipitation of colloids by electrolytes, A., i, 845.
the toxic and anti-toxic action of salts, A., ii, 106.
Mathewson, *C. H.*, compounds of sodium with tin, A., ii, 634.
Mathias, *Emile* [*Ovide Joseph*], heat of vaporisation of liquefied gases, A., ii, 372.
Mathieu, *L.*, spontaneous oxidation of ethyl alcohol, A., i, 730.
Matignon, *Camille* [*Arthème*], thermochemistry of neodymium, A., ii, 505.
anhydrous neodymium chloride, A., ii, 525.
condition of a chemical reaction forming a monovariant system, A., ii, 235.
properties of some anhydrous chlorides of rare metals, A., ii, 391, 458.
Matignon, *Camille*, and *François* **Bourion**, transformation of oxides and oxygenated metallic salts into anhydrous chlorides; application to analysis, A., ii, 459.
Matignon, *Camille*, and *Gaston* **Desplantes**, oxidation of metals in the cold in presence of ammonia, A., ii, 322.
Matignon, *Camille*, and *René* **Trannoy**, combinations of samarium chloride with gaseous ammonia, A., ii, 165.
preparation of binary compounds of metals by the alumino-thermic method, A., ii, 588.
Matsubara, *Kōichi*, and *William Henry* **Perkin**, *jun.*, experiments on the synthesis of the terpenes. Part IV. Synthesis of Δ^{3}-normenthenol(8), $\Delta^{3,8(9)}$-normenthadiene, normenthanol(8), $\Delta^{8(9)}$-normenthene, &c., T., 661; P., 131.
Matter, *Otto*. See *Emil* **Erlenmeyer**, *jun.*
Matthaei, *Gabrielle L. C.* See *F. Frost* **Blackman**.
Matthies, *W.*, glow discharge in vapours of the mercuric haloids, A., ii, 669.
measurement of potentials in iodine vapour, A., ii, 793.
Mattisson, *Max*. See *Amé* **Pictet**.
Matuschek, *Joh.*, preparation of nitroproducts of organic compounds, A., i, 256.
action of ammonium chloride on potassium ferricyanide, A., i, 422.
a method for the preparation of a mixture of nitric oxide and nitric peroxide, A., ii, 84.
action of sodium nitrate on native sulphides, A., ii, 457.
Matz, *Benjamin*. See *Carl Adam* **Bischoff**.
Maué, *Anton*. See *Theodor* **Zincke**.
Maurenbrecher, *A. D.* See *Bernhard* **Tollens**.

Mauthner, *Ferdinand,* phenothioxins, A., i, 461.
Mauthner, *Ferdinand.* See also *Paul* **Friedländer.**
Mauz, *Paul.* See *Otto* **Sackur.**
Maximowitsch, *Sergius,* a new process for making electrolytic iron, A., ii, 253.
Maxwell, *Samuel Steen,* effect of salt solutions on cilia, A., ii, 269.
Mayer. See *Paul* **Petit.**
Mayer, *Adolf* [*Eduard*], humic acids of grey sand and brown sandstone, A., ii, 55.
Mayer, *André.* See *Victor* **Henri.**
Mayer, *Charles,* condensation of imines with aldehydes and ketones, A., i, 214.
condensation of imines with ketones and nitromethane, A., i, 357.
condensation of benzylideneaniline with ethyl acetonedicarboxylate, A., i, 429.
properties of β-anilinoketones derived from fatty ketones, A., i, 791.
Mayer, *Fritz.* See *Martin* **Freund.**
Mayer, *Otto,* [silver dichromate], A., ii, 86.
Mayer, *Otto von.* See *Paul* **Jannasch.**
Mayer, *Paul.* See *Carl* **Neuberg.**
Mayer, *W.,* and *Bernhard* **Tollens,** fucosephenylosazone, A., i, 746.
Mazaraki, *Wladimir.* See *Carl Adam* **Bischoff.**
Mazé, *Pierre,* and *A.* **Perrier,** assimilation of certain ternary substances by vegetables, A., ii, 112.
Mazzara, *Girolamo,* and *Alessandro* **Borgo,** dichloropyrrole and dichlorodibromopyrrole. IX., A., i, 659.
chloropyrrole and chlorotribromopyrrole. X., A., i, 817.
action of sulphuryl chloride on methyl pyrrole-2-carboxylate. XI., A., i, 817.
action of sulphuryl chloride on 2-methylindole (methylketole), A., i, 827.
action of bromine on chloroindole and of sulphuryl chloride on scatole, A., i, 925.
action of sulphuryl chloride on indole, A., i, 925.
Mazzucchelli, *Arrigo,* electrolytic potential of chromous salts (electrochemical equilibrium between various degrees of oxidation). II., A., ii, 570.
preparation of carbon compounds containing two consecutive double linkings, A., i, 633.
Meakin, *Harold,* and *Charles Edwin* **Wheeler,** the opsonic index in phthisis, A., ii, 845.
Mebus, *Artur,* ethyl methylethyloxalacetate and some of its derivatives, A., i, 507.
Medvedeff, *An. K.,* derivative of glycuronic acid and *p*-nitrophenylhydrazine, A., i, 491, 612.
Meerburg, *Pieter Adriaan,* the system: potassium iodate, iodic acid, and water at 30°, A., ii, 17.
determinations in the system: cupric chloride, ammonium chloride, and water, A., ii, 17.
some determinations in the systems: KIO_3—HIO_3—H_2O, $NaIO_3$—HIO_3—H_2O, and NH_4IO_3—HIO_3—H_2O, A., ii, 508.
Mees, *Charles Edward Kenneth.* See *Samuel Edward* **Sheppard.**
Mehring, *Heinrich,* estimation of the loss by ignition in soil analysis, A., ii, 615.
Meigen, [*Ernst*] *Wilhelm* [*Gustav*], calcium carbonate. II. Precipitation, A., ii, 454.
Meinertz, *Joseph,* the liver in phosphorus poisoning, A., ii, 470.
Meinertz, *Joseph.* See also *Albert* **Neumann.**
Meingast, *Fritz,* condensation of lævulic acid with isobutaldehyde, A., i, 319.
Meisenheimer, *Jakob,* formation of salts of benzoin, A., i, 291.
Meisenheimer, *Jakob,* and *Friedrich* **Heim,** action of alkalis on phenylnitroethylene, A., i, 269.
Meisenheimer, *Jakob.* See also *Eduard* **Buchner.**
Meister, Lucius, & Brüning. See **Farbwerke vorm. Meister, Lucius, & Brüning.**
Méker, *Georges,* new laboratory burners and their adaptation to the production of high temperatures, A., ii, 142.
Meldola, *Raphael,* and *Lewis* **Eynon,** a method for the direct production of certain aminoazo-compounds, T., 1.
Meldola, *Raphael,* and *Joseph Henry* **Lane,** note on β-NH-ethenyldiaminonaphthalene, P., 24.
Meldola, *Raphael,* and *Frank George Coad* **Stephens,** dinitroanisidines and their products of diazotisation, T., 1199; P., 218.
Melikoff, *Petr G.,* perborates, A., ii, 246.
Melikoff, *Petr G.,* and *Eugen* **Eltschaninoff,** qualitative reactions for columbium and tantalum, A., ii, 358.

Meltzer, *S. J.*, and *John* **Auer**, rate of absorption from intra-muscular tissue, A., ii, 181.
studies on magnesium salts. I. Anæsthesia by subcutaneous injections, A., ii, 743.
Meltzer, *S. J.*, and *William* **Salant**, effect of intravenous injections of bile on blood-pressure, A., ii, 836.
Melville, *Wm.* See *Alfred Holmes* **White**.
Mendel, *Lafayette Benedict*, and *Harold C.* **Bradley**, physiology of molluscs. I., A., ii, 179.
physiology of molluscs. II. Inorganic constituents of the liver of Sycotypus, A., ii, 737.
Mendel, *Lafayette Benedict*, and *Oliver E.* **Closson**, elimination of creatinine, A., ii, 186.
Mendel, *Lafayette Benedict*, and *Philip H.* **Mitchell**, utilisation of carbohydrates without intervention of alimentary digestion processes, A., ii, 733.
Mendel, *Lafayette Benedict*, and *Elbert William* **Rockwood**, utilisation of proteids without the intervention of digestion, A., ii, 45.
Mendel, *Lafayette Benedict*, and *Frank Pell* **Underhill**, paths of absorption from the liver, A., ii, 737.
Mendel, *Lafayette Benedict*. See also *Thomas Burr* **Osborne**.
Menschutkin, *Nicolai A.*, influence of indifferent solvents on the alkylation of organic bases, A., i, 663.
Merck, *Emanuel*, cyanodialkylacetylcarbamides, A., i, 178.
imino-*CC*-dialkylbarbituric acids (5:5-dialkylmalonylguanidines), A., i, 179, 751.
preparation of barbituric acid and its homologues, A., i, 179.
preparation of a non-poisonous saponin, A., i, 365.
cyano-derivatives of pyrimidine, A., i, 670.
*endo*iminotriazoles, A., i, 949.
Mering, *Josef von*. See *Emil* **Fischer**.
Merling, *Georg*, [with *Robert* **Welde** and *Aladar* **Skita**], constitution of the cyclohexenonecarboxylic esters, A., i, 349.
Merriam, *Edmund S.* See *Walther* **Nernst**.
Merriman, *Richard William*. See *Siegfried* **Ruhemann**.
Meslin, *Georges*, coefficient of magnetisation of bismuth; some points of reference in the diamagnetic scale, A., ii, 228.
Meslin, *Georges*, ionisation and the coefficient of magnetisation of aqueous solutions, A., ii, 433.
Meszlényi, *Emil*, molybdenum compound of nicotine, A., i, 371.
Metcalf, *Wilmot Vernon*, solid peptone membranes on a water-surface, and the cause of their formation, A., ii, 512.
Meth, *Richard*. See *Willy* **Marckwald**.
Mettler, *Arthur J.* See *Henry Clapp* **Sherman**.
Mettler, *Carl*, electrolytic reduction of aromatic carboxylic acids to the corresponding alcohols, A., i, 436.
m-halogen-benzaldehydes, A., i, 790.
Metzener, *W.* See *Karl A.* **Hofmann**.
Metzl, *A.* See *Georg* **Vortmann**.
Meulen, *Henri ter*, the nature of the sugars of certain glucosides, A., i, 803.
Meunier, *Léon.* See *François* **Couturier**.
Meusser, *Adolf*, solubility of potassium chloride, bromide, and iodide in water, A., ii, 317.
Meusser, *Adolf*. See also *Franz* **Mylius**.
Mewes, *Rudolf*. See *Edward* **Jüngst**.
Meyer, *Arthur*, apparatus for the cultivation of anaërobic bacteria and for the estimation of the oxygen-minima for germination, growth, and spore-production of bacteria, A., ii, 848.
Meyer, *Carl*. See *August* **Michaelis**.
Meyer, *Diedrich*, [manurial] action of different forms of calcium and magnesium, A., ii, 197.
Meyer, *Eberhard*. See *Robert* **Behrend**.
Meyer, *Edgar*, and *Ernst* **Müller**, cause of the ionisation of air in contact with phosphorus, A., ii, 141.
Meyer, *Ernst* [*Sigismund Christian*] *von*, dimolecular nitriles, A., i, 155.
Meyer, *Fernand*, preparation of aurous iodide by the action of iodine on gold, A., ii, 42.
Meyer, *Georg*. See *Ludwig* **Knorr**.
Meyer, *Gustave M.*, and *William John* **Gies**, pigments of the purple pitcher plant, A., ii, 193.
Meyer, *Hans* (Prag), isomeric esters of aromatic keto-acids, A., i, 133.
esterification by means of sulphuric acid. II., A., i, 137.
2:6-substituted pyridinecarboxylic acids, A., i, 155.
quinoline-2-carboxylic chloride, A., i, 666.
Meyer, *Hans* (Prag), and *Otto* **Hönigschmid**, caryophyllin, A., i, 456.
Meyer, *Hans* (Marburg). See *Otto* **Loewi** and *Friedrich* **Stolz**.
Meyer, *Heinrich L.* See *Gustav* **Heller**.
Meyer, *Julius*, calculation of atomic weights, A., ii, 238.

Meyer, *Julius*, theory of auto-oxidation, A., ii, 697.
atomic weight of silicon. II., A., ii, 815.
Meyer, *Julius*. See also *W.* **Becker**, *Hans* **Eggeling**, and *P.* **Engler**.
Meyer, *Richard Emil*, 9-phenylxanthen, A., i, 226.
Meyer, *Richard Emil*, and *Oskar* **Spengler**, action of alcoholic potassium hydroxide on phenanthraquinone, A., i, 219, 362.
constitution of the phthalein salts, A., i, 440.
Meyer, *Richard Josef*, bibliography of the rare earths, A., ii, 249.
Meyer, *Richard Josef*, and *Alfred* **Gumperz**, uniform nature of thorium, A., ii, 257.
Meyer, *Stefan*. See *Heinrich* **Mache**.
Meyerhoffer, *Wilhelm*, breaks in the solubility curves, A., ii, 13.
Meyerhoffer, *Wilhelm*. See also *Jacobus Henricus van't* **Hoff**.
Meyersberg, *Paul*, reduction of dimethyltrimethylene glycol ($\beta\beta$-dimethylpropane-$\alpha\gamma$-diol) by means of fuming hydriodic acid, A., i, 166.
Meystowicz, *Simon von*. See *Carl Adam* **Bischoff**.
Mezger, *Otto*, detection of boric acid, A., ii, 764.
Michael, *Arthur*, phenylcarbimide as a reagent for determining the constitution of tautomeric compounds, A., i, 195.
history of the theory of the formation and constitution of ethyl sodioacetoacetate, A., i, 506.
ethyl formylacetate and ethyl α-formylpropionate, A., i, 563.
syntheses with ethyl sodioacetoacetate, A., i, 564.
Claisen's cinnamic acid synthesis, A., i, 646.
syntheses with ethyl sodiomalonate and similar compounds, A., i, 855.
Michael, *Arthur*, and *Oskar* **Eckstein**, formation of *C*-acyl derivatives from ethyl cyanoacetate by means of pyridine and quinoline, A., i, 176.
Michaelis, [*Carl Arnold*] *August*, nitroso- and azo-derivatives of 3-pyrazolones, A., i, 244.
Michaelis, *August*, [with *Johann* **Behrens**, *Wilhelm* **Hahn**, and *Carl* **Meyer**], 3-pyrazolones, A., i, 377.
Michaelis, *August*, [with *Johann* **Behrens**, *Richard* **Leonhardt**, *Heinrich* **Simon**, and *Karl* **Wahle**], azo-compounds of phenylpyrazoles and their halogen and thio-derivatives, A., i, 392.
Michaelis, *August*, [with *Richard* **Blume**, *Eduard* **Brust**, *Wilhelm* **Danzfuss**, *Albert* **Hepner**, and *Wilhelm* **Preuner**], 5-aminopyrazole and iminopyrines, A., i, 476.
Micheels, *H.*, and *P. de* **Heen**, influence of radium on the respiratory energy of germinating grains, A., ii, 431, 474.
Michel, *Anton*. See *Karl* **Lesch**.
Micheli, *F. Jules*. See *Ed.* **Sarasin**.
Michnowitsch, *Paul*, β-phenyl-β-ethylethylenelactic [β-hydroxy-β-phenylvaleric] acid, A., i, 526.
Micklethwait, (*Miss*) *Frances Mary Gore*. See *Gilbert Thomas* **Morgan**.
Milbauer, *Jar.*, action of potassium thiocyanate on metallic oxides at high temperatures, A., i, 121.
uranyl selenide and potassium chromic selenide, A., ii, 94.
Milbauer, *Jar.*, and *R.* **Hac**, estimation of cyanogen iodide in presence of iodine, A., ii, 489.
Milchner, *Richard*. See *Carl* **Neuberg**.
Milewski, *Jan*. See *Carl Adam* **Bischoff**.
Millar, *Edmund Theodore*. See *Adrian John* **Brown**.
Miller, *Edmund Howd*, and *Frederick van Dyke* **Cruser**, estimation of bismuth by precipitation as molybdate, A., ii, 358.
Miller, *Sarah P.*, estimation and separation of gold in the electrolytic way, A., ii, 67.
Milliau, *Ernest*, detection of cotton-seed oil in olive oil, A., ii, 126.
test for the purity of cocoanut oil, A., ii, 775.
Milliken, *Carl Spencer*, and *Percy Goldthwait* **Stiles**, supposed equivalence of sodium and lithium ions in skeletal muscle, A., ii, 737.
Mills, *James E.*, molecular attraction. III., A., ii, 152.
molecular attraction. IV. Biot's formula for vapour pressure and some relations at the critical temperature, A., ii, 443.
Milroy, *Ina A.*, influence of inactive substances on the optical rotation of dextrose, A., i, 174.
Milroy, *S. A.*, reduced acid hæmatin, A., i, 400.
Milroy, *Thomas Hugh*, response of the developing retina to light and radium, A., ii, 728.
Mingaye, *John Charles Henderson*, Mount Dyrring, Barraba, and Cowra meteorites A., ii, 399.

Minguin, *Jules,* influence of the ethylenic linkage in an [optically] active molecule, A., i, 321.
dissociation of strychnine salts determined by their rotatory power; rotatory power in homologous series; influence of the double linking, A., ii, 130.
Minssen, *Hermann,* diffusion in acid and neutral media, especially in humus soils, A., ii, 758.
Minunni, *Gaetano,* action of amyl nitrite on phenyl-*m*-nitrobenzylidenehydrazine, A., i, 91.
Minunni, *Gaetano,* and *Roberto* **Ciusa,** action of chlorine on brucine in glacial acetic acid solution, A., i, 230.
reduction of α-dibenzylideneacetonehydroxylamineoxime, A., i, 245.
Minunni, *Gaetano,* and *Felice* **Ferrulli,** chloro-derivatives of strychnine, A., i, 229.
Mironenko, *Wladimir.* See *Carl Adam* **Bischoff.**
Misteli, *Wilhelm,* incomplete combustion of gases; cause of the luminosity of flame, A., i, 849.
Mitchell, *Herbert Victor,* preparation of benzenazocoumarin; its bearing on the constitution of *p*-hydroxyazo-compounds, T., 1229; P., 220.
Mitchell, *Herbert Victor.* See also *John Theodore* **Hewitt.**
Mitchell, *J. Pearce.* See *Stewart Woodford* **Young.**
Mitchell, *Philip H.* See *Lafayette Benedict* **Mendel.**
Mittler, *Siegfried Toeche.* See *Leopold* **Rügheimer.**
Mixter, *William Gilbert,* new allotropic form of carbon and its heat of combustion, A., ii, 519.
Moeckel, *K.,* distribution of fat, and the total fat in a fat dog, A., ii, 467.
Mönkemeyer, *K.,* alloys of zinc and antimony, A., ii, 171.
bismuth telluride, A., ii, 828.
Moest, *Martin.* See *Hans* **Hofer.**
Mohr, *Ernst* [*Wilhelm Max*], Lossen's reaction, A., i, 274.
evidence for the possibility of resolving an optically active compound without actually resolving it and without the aid of optically active substances, A., i, 428.
a condensation product of phenylmethylpyrazolone, A., i, 676.
Hofmann's reaction, A., i, 890.
Moir, *James,* the solubility of zinc hydroxide in alkalis, P., 310.
Moissan, [*Ferdinand Frédéric*] *Henri,* new synthesis of oxalic acid, A., i, 507.
the preparation of pure boron trifluoride and silicon tetrafluoride and some physical constants of these compounds, A., ii, 26.
investigation of the meteorite of Cañon Diablo, A., ii, 43.
new experiments on the preparation of diamonds, A., ii, 160, 450.
the increase in volume of molten cast iron saturated with carbon in the electric furnace at the moment of solidifying, A., ii, 166.
the carbon silicide of the Cañon Diablo meteorite, A., ii, 247.
some reactions of the alkali and alkaline-earth hydrides; influence of traces of moisture on the decomposition of the alkali hydrides by carbon dioxide or acetylene, A., ii, 818.
Moissan, *Henri,* and *G.* **Chavanne,** some constants of pure methane; the action of solid methane on liquid fluorine, A., i, 253.
some physical constants of calcium and calcium amalgam, A., ii, 163.
Moissan, *Henri,* and *Paul* **Lebeau,** action of fluorine on oxygenated compounds of nitrogen, A., ii, 517.
preparation and properties of nitroxyl fluoride (nitryl fluoride), A., ii, 518.
Moissan, *Henri,* and **Martinsen,** preparation and properties of thorium chloride and bromide, A., ii, 531.
Moldenhauer, *Wilhelm,* connection between electrolytic changes and the temperature of the electrodes, A., ii, 500.
Molisch, *Hans,* heliotropism indirectly caused by radium, A., ii, 412.
Molkereitechn. Inst. Sichler & Richter, Leipzig, sinacid-butyrometry, A., ii, 361.
Moll van Charante, *Jacob,* sulphoisobutyric acid, A., i, 16.
Molliard, pure culture of green plants, in a confined atmosphere, in presence of organic matters, A., ii, 750.
Monhaupt, *M.,* detection and estimation of boric acid in butter, A., ii, 354.
Montagne, *P. J.,* intramolecular atomic rearrangements in benzpinacones, A., i, 58, 445, 524.
Montanari, *Carlo,* red colouring matter of tomatoes, A., i, 293.
acidity of plant roots, A., ii, 191.
estimation of calcium and magnesium carbonates, A., ii, 204.

Montanari, *Carlo*, absorptive power of soils for bone and mineral superphosphates, A., ii, 759.

Moodie, (*Miss*) *Agnes Marion*. See *James Colquhoun* **Irvine**.

Moody, *Gerald Tattersall*, causes of variegation in Keuper marls, A., ii, 725.

Moody, *Seth E.*, iodometric determination of aluminium in aluminium chloride and aluminium sulphate, A., ii, 765.

Moore, *Benjamin*, hydrochloric acid in the gastric juice in cancer, A., ii, 741.

Moore, *Benjamin*, and *Herbert E.* **Roaf**, physical chemistry of anæsthesia, A., ii, 272.

Moore, *George T.*, new method for the purification of water supplies, A., ii, 107.

Moore, *J. E. S.* See *J. E.* **Farmer**.

Moore, *Richard B.* See *Herman* **Schlundt**.

Mooser, *W.*, [new alkaloid in] earth-nut, A., i, 79.

Morawetz, *Wilhelm*, condensation of methylethylacraldehyde with isobutaldehyde, A., i, 262.

Morawitz, *P.*, the proteids of the blood, A., ii, 837.

Morchoisne, *E.* See *Henri* **Labbé**.

Moreau, *Georges* [*Gaston Émile*], new class of ions, A., ii, 9.

Moreigne, *Henri*, colour reaction of uric acid with phosphotungstic acid; preliminary treatment of urine before estimating urea, A., ii, 212.

Morel, *Albert*. See *Maurice* **Doyon** and *Louis* **Hugounenq**.

Morgan, *Gilbert Thomas*, triboluminescence in the acridine series, A., ii, 786.

Morgan, *Gilbert Thomas*, and *Arthur* **Clayton**, influence of substitution on the formation of diazoamines and aminoazo-compounds. Part IV. 5-Bromo-*as*(4)-dimethyl-2:4-diaminotoluene, T., 944; P., 182.

Morgan, *Gilbert Thomas*, and (*Miss*) *Frances Mary Gore* **Micklethwait**, the diazo-derivatives of the benzenesulphonylphenylenediamines, T., 73; P., 8; discussion, P., 9.

the diazo-derivatives of monoacylated aromatic para-diamines, T., 921; P., 179; discussion, P., 180.

the arylsulphonyl-*p*-diazoimides, T., 1302; P., 222.

the diazo-derivatives of 1:5- and 1:8-benzenesulphonylnaphthylenediamines, P., 303.

Morgan, *Gilbert Thomas*, and *Francis E.* **Richards**, azo-colouring matters derived from *ar*-tetrahydro-α-naphthylamine, A., i, 616.

Morgan, *Gilbert Thomas*, and *William Ord* **Wootton**, influence of substitution on the formation of diazoamines and aminoazo-compounds. Part III. Azo-derivatives of symmetrically di-substituted primary meta-diamines, T., 935; P., 179.

Morgen, *August*, *Carl* **Beger**, and *Gustav* **Fingerling**, influence of fat and other substances on milk production when given in addition to a scanty basal food, A., ii, 649.

Moriya, *G.*, lactic acids in the animal organism, A., ii, 181.

Morley, *Edward Williams*, quantity of moisture left in a gas after its passage over phosphoric oxide, A., ii, 381.

Morozewicz, *Józef*, beckelite, a calcium cero-lanthano-didymo-silicate, A., ii, 177.

Morrell, *Robert Selby*, and *Albert Ernest* **Bellars**, action of hydrogen peroxide on carbohydrates in the presence of ferrous sulphate. Part V., T., 280; P., 79.

some compounds of guanidine with sugars, A., i, 577.

Morris-Airey, *H.*, and *E. D.* **Spencer**, temperature-coefficient of electrical resistivity of carbon at low temperatures, A., ii, 668.

Morse, *Harmon Northrup*, and *Joseph Christie Whitney* **Frazer**, osmotic pressure and freezing points of solutions of sucrose, A., ii, 575.

Morse, *Harmon Northrup*, and *Levi Shoemaker* **Taylor**, electrical method for the combustion of organic compounds, A., ii, 480.

Moser, *Alexander*. See *Fritz* **Haber**.

Moser, *L.*, titration of copper by potassium iodide, and applicability of the method in presence of iron and arsenic, A., ii, 64, 422.

Moss, *Richard Jackson*, state in which helium exists in pitchblende, A., ii, 520.

Mosse, *Max*, staining reactions of animal cells, A., ii, 182.

Mosse, *Max*. See also *Hermann* **Silbergleit**.

Motion, *John*. See *Edward C.* **Worden**.

Mott, *Wm. Roy*. See *Hector Russell* **Carveth** and *Harrison Eastman* **Patten**.

Mottek, *Siegbert*. See *Emil* **Knoevenagel**.

Mouilpied, *Alfred Theophilus de*, the condensation of phenylglycinoacetic esters in presence of sodium alkyloxides, T., 435; P., 63.
Moulin, *M.* See *P.* **Langevin**.
Mourawiew-Winigradoff, *Anna.* See *Fritz* **Ullmann**.
Moureu, *Charles*, chemical composition of the radioactive gaseous mixtures evolved from the waters of thermal springs; presence of helium, A., ii, 5.
Moureu, *Charles*, and *Amand* **Valeur**, action of methyl iodide on sparteine, A., i, 608.
stereoisomerism of sparteine methiodides, A., i, 608.
action of ethyl iodide on sparteine, A., i, 609.
symmetry of the sparteine molecule, A., i, 659.
sparteine, A., i, 716.
Mouson, *J. G.* See *Otto* **Fischer**.
Moutier, *F.* See *Émile* **Louise**.
Moycho, *Stefan*, and *Franz* **Zienkowski**, methylcamphenylol, A., i, 654.
camphene, A., i, 710.
Much, *H.* See *Wilhelm* **Biltz**.
Mudge, *George P.*, pigmentation and intravascular coagulation, A., ii, 539.
Mühlhausen, *Gottfried.* See *Theodor* **Zincke**.
Müller, "basic slag-ammonia," a new manure; its composition and results of manurial experiments in 1904, A., ii, 650.
Müller, *Arthur*, solubility of metallic hydroxides in glycerol, A., i, 254.
Müller, *Carl.* See *Julius von* **Braun**.
Müller, [*Max*] *Erich*, and *Richard* **Lucas**, cathodic pulverisation of tellurium, A., ii, 672.
Müller, *Erich*, and *Fritz* **Spitzer**, electrolytic oxidation of ammonia to nitrites, A., ii, 242, 314.
electrolytic reduction of nitrates to nitrites, A., ii, 314.
electrolytic preparation of nitrite from nitrate, especially at silver cathodes, A., ii, 703.
Müller, *Erich.* See also **Consortium für Elektrochemische Industrie** and *Fritz* **Foerster**.
Müller, *Ernst.* See *Edgar* **Meyer**.
Müller, *Karl*, essential oils from liverworts, A., i, 713.
chemical composition of the cell membrane in various cryptogams, A., ii, 648.
Müller, *Max.* See *Alexander* **Naumann**.
Müller, *O.* See *Alexander* **Tschirch**.
Münch, *Eduard.* See *Robert* **Stollé**.
Münch, *Siegmar.* See *Friedrich Wilhelm* **Küster** and *Theodor* **Zincke**.
Müther. See *Conrad von* **Seelhorst**.
Muir, *Robert*, and *Carl H.* **Browning**, chemical combination and toxic action as exemplified in hæmolytic sera, A., ii, 107.
Muller, *Joseph Auguste*, source of the excessive moisture found in certain combustions, A., i, 756.
action of ketone reagents on sodium carbonylferrocyanide, A., i, 757.
estimation of lead and antimony as sulphides, A., ii, 118.
analysis of lead minerals, A., ii, 119.
estimation of carbon, hydrogen, and nitrogen in cyanides, A., ii, 767.
Muller, *Paul Thiébaud*, chemical changes in bone marrow after intraperitoneal injection of Bacteria, A., ii, 468.
Muller, *Paul Thiébaud*, and *Charles* **Fuchs**, determination of specific heats of solutions; molecular heats of good and bad electrolytes, A., ii, 504.
Muller, *Paul Thiébaud.* See also *Albin* **Haller**.
Mulzer, *Paul*, behaviour of iodoform in the body, A., ii, 409.
Mumm, *Otto.* See *Heinrich* **Biltz**.
Mummery, *William Rest.* See *Frederick Thomas* **Harry**.
Mundici, *Curio Manio.* See *Mario* **Betti**.
Munk, *Julius*, action of dilute sulphuric acid on the glycol obtained by reduction of propionaldol, A., i, 559.
Muraro, *F.*, estimation of lecithin in grape stones and in wine, A., ii, 564.
Murlin, *J. R.*, gelatin as a substitute for proteid in food, A., ii, 180.
Murmann, *Ernst*, analysis of bar copper (reply to Hampe's criticism), A., ii, 421.
Mylius, *Franz* [*Benno*], and *Rudolf* **Dietz**, zinc chloride; solubility of salts. XIV., A., ii, 321.
Mylius, *Franz*, and *Adolf* **Meusser**, use of quartz vessels in the laboratory, A., ii, 316.
Mysík, *B.* See *Karl* **Andrlík**.

N.

Nance, *J. Trengrove*, the existence of a carbide of magnesium, P., 124.
Narbutt, *J.* See *Alex. D.* **Bogojawlensky**.
Nasini, *Raffaelo*, fundamental laws of stoichiometry and the atomic theory; the Faraday lecture by W. Ostwald, A., ii, 514.

Nasini, *Raffaelo*, *Francesco* **Anderlini**, and *Mario Giacomo* **Levi**, radioactivity of the boric acid suffioni of Tuscany and the amount of the emanation contained therein, A., ii, 786.

Nasini, *Raffaelo*, *Francesco* **Anderlini**, and *Roberto* **Salvadori**, Italian terrestrial emanations. II. Gases from Vesuvius, the Flegrei Plains, the Albule waters of Tivoli, and the springs of Viterbo, Pergine, and Salsomaggiore, A., ii, 538.

Nathan, *Leopold*, *Arthur* **Schmid**, and *Willy* **Fuchs**, influence of metals on fermenting liquids, A., ii, 340, 847.

Naumann, *Alexander* [*Nicolaus Franz*], [and, in part, with *Wilhelm* **Eidmann**, *Max* **Müller**, *Paul* **Schulz**, and *Ernst* **Voigt**], reactions between salts in non-aqueous solutions. II. In acetone, A., ii, 29.

Naumann, *Alexander*, and *Adolf* **Rücker**, influence of silver nitrate on the solubility of silver nitrite, A., ii, 522.

Naumann, *Alexander*, [and *Johannes* **Schroeder**], reactions of salts in non-aqueous solutions. III., A., ii, 30.

Naumann, *Kurt*. See *Julius* **Tafel**.

Naylor, *William Arthur Harrison*, and *E. J.* **Chappel**, examination of drugs for arsenic, A., ii, 117.

Nef, *John Ulric*, dissociation of the glycols and of the glycerols. I. and II., A., i, 3.

fundamental conceptions underlying the chemistry of the element carbon, A., i, 109.

Neilson, *Charles Hugh*, and *Orville H.* **Brown**, further proof of ionic action in physiological processes, A., ii, 45.

Neilson, *Charles Hugh*, and *Oliver P.* **Terry**, effect of dextrose and certain salts on the rate of transformation of glycogen into dextrose, A., ii, 736.

effect of hypnotics and antipyretics on the rate of catalysis of hydrogen dioxide by kidney extract, A., ii, 738.

Neilson, *Charles Hugh*. See also *Orville H.* **Brown**.

Neimann, *Ernst*. See *Carl* **Neuberg**.

Neimann, *Wilhelm*. See *Carl* **Neuberg**.

Nernst, [*Hermann*] *Walther*, formation of nitric oxide at high temperatures, A., ii, 24.

determination of chemical equilibrium from explosion processes. II., A., ii, 444.

Nernst, *Walther*, and *Edmund S.* **Merriam**, theory of the residual current, A., ii, 674.

Nernst, *Walther*, and *H. von* **Wartenberg**, dissociation of carbon dioxide, A., ii, 629.

Neuberg, *Carl*, the phenylmethylhydrazine reaction of fructose, A., i, 90.

amyloid, A., i, 162.

the pyrrole reaction, A., ii, 127.

chemistry of cancer. II. Abnormal fermentative occurrences, A., ii, 338.

estimation of glycuronic acid, A., ii, 658.

detection of lævulose in the presence of glucosamine, A., ii, 769.

Neuberg, *Carl*, and *Max* **Federer**, *d*-phenylamylhydrazine, A., i, 299.

resolution of racemic substances. II., A., i, 299.

Neuberg, *Carl*, and *Paul* **Grosser**, a new compound of sulphur in dogs' urine, A., ii, 739.

Neuberg, *Carl*, and *Albert* **Manasse**, isolation of amino-acids, A., i, 647.

Neuberg, *Carl*, and *Paul* **Mayer**, cysteine. II., A., i, 567.

d-, *l*-, and *r*-protein-cystines, A., i, 568.

Neuberg, *Carl*, and *Richard* **Milchner**, the behaviour of carbohydrates in autolysis, A., ii, 45.

Neuberg, *Carl*, [and *Ernst* **Neimann**], diamines. II. New synthesis of diamines, A., i, 686.

synthesis of hydroxy- and diamino-acids. II. Diaminosuberic acid and diaminosebacic acid, A., i, 687.

Neuberg, *Carl*, and *Wilhelm* **Neimann**, new reactions and derivatives of glycuronic acid. VII., A., i, 411.

synthesis of condensed glycuronic acids. VIII., A., i, 412.

estimation of condensed glycuronic acids. IX., A., ii, 426.

Neuberg, *Carl*, and *Dora* **Rauchwerger**, new test for cholesterol, A., ii, 122.

Neuberg, *Carl*, and *Martin* **Silbermann**, glyceric acid derivatives. III. Configuration of glyceric acid, A., i, 408.

synthesis of aminohydroxysuccinic acid, A., i, 418.

Neuberg, *Carl*. See also **Beitzke** and *Adolf* **Loewy**.

Neumann, estimation of nitrogen in barley, A., ii, 202.

Neumann, *A*. See *Oskar* **Drude**.

Neumann, *Albert*, addenda to simple method for decarbonising substances; estimations in the decarbonised product, A., ii, 68.

Neumann, *Albert*, and *Joseph* **Meinertz**, estimation of sulphur by aid of sodium peroxide, A., ii, 59.

Neumann, *Bernhard*, a new apparatus for gas analyses, A., ii, 855.
Neumann, *Walter*, peptones, A., i, 726.
Neumann-Wender, the mechanism of the guaiacum reaction, A., ii, 199.
Neville, *Allen*. See *Robert Howson* **Pickard**.
Newerowitsch, *N.*, action of potassium hydroxide on a mixture of phenylacetylene and pinacolin: synthesis of phenylacetylenylmethyltert.-butylcarbinol, A., i, 775.
Nicloux, *Maurice*, alcohol in animal organs, A., ii, 181.
Nicolaier, *Arthur*, action of urotropine and allied compounds, A., ii, 188.
Nicolardot, *Paul*, ferric ethoxide, A., i, 316.
colloidal ferric oxide, brown modification, A., ii, 167.
Nicolas, *Émile*, detection of formaldehyde in milk, A., ii, 488.
Nicolas, *Émile*, and **Delaud**, apparatus for the estimation of nitrogen, A., ii, 60.
Nicolau, *Th.*, copper-pitch-ore from Amzalar, Roumania, A., ii, 599.
titanite from Urotva, Transylvania, A., ii, 599.
Niemczycki, *Stanislas*, syntheses by means of zinc chloride [isobutyltoluene], A., i, 579.
Niementowski, *Stefan* [*Dominik* (*Ritter*)] *von*, synthesis of quinoline derivatives. III. Action of ethyl benzoylacetate on anthranilic acid, A., i, 611.
Niementowski, *Stefan von*, and *M.* **Seifert**, diquinolyls, A., i, 300.
Niementowski, *Stefan von*. See also *Wl.* **Baczyński**.
Nierenstein, *Maximilian*, tannins producing a "bloom" [on leather], A., i, 365, 805.
the carbonyl group as tannophore, A., i, 805.
constitution of tannin, A., i, 914.
Nierenstein, *Maximilian*. See also *Arthur George* **Perkin**.
Nietzki, *Rudolf* [*Hugo*], and *Alfred* **Humann**, 2-nitro-3:6-dihydroxy-*p*-benzoquinone-5-sulphonic acid, A., i, 217.
Nieuwland, *Julius A.*, some reactions of acetylene, A., i, 557.
Nitkowski, *Stanislaus*. See *Stanislaus von* **Kostanecki**.
Nobbe, *Friedrich*, and *L.* **Richter**, treatment of soil with ether, carbon disulphide, chloroform, benzene, and hydrogen peroxide; effect on the growth of plants, A., ii, 53.
Noble, *R. W.* See *Julius* **Stieglitz**.
Nöll, *Philipp*. See *Erwin* **Rupp**.
Noël Paton, *Diarmid*, effect of adrenaline on excretion of sugar and nitrogen in birds, A., ii, 106.
Folin's theory of proteid metabolism, A., ii, 734.
Noël Paton, *Diarmid*. See also *Alexander* **Goodall**.
Noelting, [*Domingo*] *Emilio*, and *Karl* **Dziewoński**, rhodamines. I., A., i, 935.
Noelting, *Emilio*, and *Émile* **Kopp**, *p*-dichloroaminobenzene [2:5-dichloroaniline], A., i, 872.
Noguchi, *Hideyo*. See *Simon* **Flexner** and *Thorvald* **Madsen**.
Nordenskiöld, *Ivar*, triplite from a new Swedish locality, A., ii, 174.
Nordman, *Charles*, registration of atmospheric ionisation by means of falling water, A., ii, 227.
Norman, *George Marshall*. See *John Cannell* **Cain**.
North, *Barker*, and *W.* **Blakey**, preparation of standard solutions of sulphuric acid, A., ii, 417.
Northall-Laurie, *Dudley*. See *Herbert* **Jackson**.
Norton, *F. A.*, Durum wheat, A., ii, 754.
Norton, *F. A.*, and *A. E.* **Koch**, detection and estimation of arsenic and antimony in presence of organic matter, A., ii, 858.
Nové, *H.*, presence of dextrose in tannin solutions, A., ii, 210.
Novotny, *Karl*, titration of sodium hydroxide in presence of sodium carbonate, A., ii, 765.
Nowicki, *Romuald*, new gas-absorption apparatus, A., ii, 760.
Noyes, *Arthur Amos*, and *William H.* **Whitcomb**, solubility of lead sulphate in ammonium acetate solutions, A., ii, 523.
Noyes, *William Albert*, camphoric acid. XIV. Derivatives of trimethylparaconic acid, A., i, 322.
Noyes, *William Albert*, and *Howard Waters* **Doughty**, dimethyladipic and trimethyladipic acids, A., i, 321.
Nozari, *M.* See *Efisio* **Ferrero**.

O.

Obermüller, *Paul*, determination of the decomposition-velocity of nitrocellulose, A., ii, 291.
Ockinga, *K. A.* See *Walther* **Borsche**.
Oddo, *Bernardo*, action of sulphuryl chloride on mixed organo-magnesium compounds, A., i, 400.

Oddo, *Giuseppe*, dicamphorquinone and isodicamphorquinone, A., i, 448.
Oddo, *Giuseppe*, and *Amedeo* **Colombano**, solanin from *Solanum sodomaeum*, A., i, 455.
Oddo, *Giuseppe*, and *Guido* **Cusmano**, chlorination of *n*-propyl alcohol, A., i, 402.
Oddo, *Giuseppe*, and *Ernesto* **Puxeddu**, 5-aminoeugenol, A., i, 432.
5-azoeugenol and its constitution, A., i, 492.
reduction of hydroxyazo-compounds to aminophenols by phenylhydrazine, A., i, 842.
Oechsner de Coninck, *William* [*François*], crotonic and isocrotonic acids, A., i, 628.
uranyl chloride, A., ii, 38.
cobalt chloride tetrahydrate, A., ii, 254.
synthesis of sodium uranyl sulphate by Spring's process, A., ii, 254.
cobalt chloride, A., ii, 393.
cæsium uranyl sulphate, A., ii, 395.
selenic acid, A., ii, 517.
Oechsner de Coninck, *William*, and **Chauvenet**, two double sulphates of uranyl, A., ii, 394.
lithium uranyl sulphate and magnesium uranyl sulphate, A., ii, 530.
Oechsner de Coninck, *William*, and **Raynaud**, action of sulphuric acid on organic acids, A., i, 321.
Oefele, *Felix* (*Baron*) *von*, substances soluble in ether in human fæces, A., ii, 102.
statistical tables of the amount of nitrogenous substances in human fæces, A., ii, 337.
Oehler, *K.*, [azo-compounds from 3-hydroxydiphenylamine], A., i, 161.
disazo-dyes from 6-amino-α-naphthol-3-sulphonic acid, A., i, 162.
[bistoluene-*p*-sulphone-*m*-tolylenediamide], A., i, 829.
disazo-dyes from 6-amino-α-naphthol-3:7-disulphonic acid, A., i, 845.
Öholm, *L. William*, diffusion of electrolytes in water, A., ii, 147.
Oerum, *H. P. T.*, human bile, A., ii, 337.
estimation of urinary indican by Meisling's colorimeter, A., ii, 872.
Oesterle, *Otto A.*, chrysophanic acid, A., i, 911.
Ofner, *Rudolf*, separation of aldoses by secondary hydrazines, A., i, 90.
action of secondary asymmetric hydrazines on sugar, A., i, 158, 937.
detection of lævulose in the human body fluids, A., ii, 769.
Ohl, *Herman.* See *Ernst Hermann* **Riesenfeld.**
Ohlmer, *Friedrich.* See *Max* **Bodenstein.**
Okada, *Sadajiro*, action of phosphorus pentachloride on tartranil, A., i, 875.
Olie, *J., jun.* See *Hendrik Willem Bakhuis* **Roozeboom.**
Olig, *A.*, and *Josef* **Tillmans**, the mean molecular weight of the non-volatile fatty acids of Dutch butter, A., ii, 212.
Olsen, *John Charles*, *Ernest Seabury* **Clowes**, and *William O.* **Weidmann**, estimation of manganese as green sulphide, A., ii, 206.
Olsen, *John Charles*, and *Walter S.* **Rapalje**, composition of the four sulphides of manganese, A., ii, 91.
Onnes. See **Kamerlingh Onnes.**
Onorato, *P.* See *Francesco Carlo* **Palazzo.**
Oordt, *Gabriel van*, separation of glucinum from aluminium and iron, A., ii, 88.
Oordt, *Gabriel van.* See also *Fritz* **Haber.**
Opfermann, *Erich*, action of formaldehyde on thiocarbanilide, A., i, 770.
Opie, *Eugene L.*, enzymes and anti-enzymes of exudates, A., ii, 845.
Opolski, *St.*, influence of light and heat on the chlorination and bromination of homologues of thiophen, A., i, 367.
Oppenheim, *Moritz.* See *Adolf* **Jolles.**
Orchardson, *Jan Quiller*, and *Charles* **Weizmann**, some derivatives of naphthoylbenzoic acid and of naphthacenequinone, P., 307.
Orglmeister, *Gustav*, [effect of feeding with material rich in arginine], A., ii, 734.
estimation of arginine with permanganate, A., ii, 777.
Orloff, *E. I.*, introduction of the groups $\cdot CH_2 \cdot OH$ and $\cdot CH_2 \cdot$ into primary aromatic amines and preparation of compounds of an imidic character, A., i, 189.
crystalline and liquid modifications of formanilide and *p*- and *o*-formotoluidides, A., i, 643.
analysis of solutions of hyposulphites; analysis of formalin, A., ii, 200.
Orndorff, *William Ridgely*, and *John Edgar* **Teeple**, bilirubin, the red colouring matter of the bile, A., i, 365.
Orton, *Kennedy Joseph Previté*, transformations of derivatives of *s*-tribromodiazobenzene, T., 99; P., 12.

Orton, *Kennedy Joseph Previté*, and *Joseph Edward* **Coates**, and (in part) *Miss Frances* **Burdett**, the influence of light on diazo-reactions. Preliminary notice, P., 168; discussion, P., 169.

Orton, *Kennedy Joseph Previté*, and (*Miss*) *Alice Emily* **Smith**, transformations of highly substituted nitroaminobenzenes, T., 389; P., 91.

Osaka, *Yūkichi*, equilibrium of the electrolytic dissociation of partially neutralised acids and bases, A., ii, 804.

distribution of iodine between two solvents, A., ii, 811.

reaction between silver nitrate and disodium hydrogen phosphate, A., ii, 820.

Osann, [*Carl*] *Alfred*, crystalline form of sodium formaldehydesulphoxylate (Rongalit C.), A., i, 568.

Osborne, *Thomas Burr*, and *Isaac Foust* **Harris**, precipitation limits with ammonium sulphate of some vegetable proteids, A., i, 555.

solubility of globulin (edestin) in salt solutions, A., i, 846.

proteids of wheat. I. The proteid soluble in alcohol, A., ii, 194.

Osborne, *Thomas Burr*, and *Lafayette Benedict* **Mendel**, ricin, A., ii, 188.

Osborne, *Thomas Burr*, *Lafayette Benedict* **Mendel**, and *Isaac Foust* **Harris**, proteids of the castor bean; isolation of ricin, A., ii, 753.

Osborne, *William Alexander*, the so-called antitoxic action of bivalent cations, A., ii, 746.

Oser, *Adam*. See *Carl* **Graebe**.

Osgood, *R. B.* See *J. E.* **Goldthwait**.

Osmond, *Floris*, and *Ch.* **Frémont**, mechanical properties of iron in isolated crystals, A., ii, 638.

Ost, [*Friedrich*] *Hermann* [*Theodor*], isomaltose, A., i, 22.

transformation of dextrose into lævulose; detection of lævulose, A., i, 684.

Ostwald, *Wilhelm*. See *Hans* **Landolt**.

Ostwald, [*Carl Wilhelm*] *Wolfgang*, swelling of β-gelatin, A., i, 848.

influence of acids and alkalis on the swelling of gelatin, A., i, 954.

toxicity of sea water on fresh-water animals, A., ii, 272.

Ostwald, *Wolfgang*. See also *Martin H.* **Fischer**.

Otori, *J.*, decomposition of pseudomucin by concentrated boiling acids. II., A., i, 104.

oxidation of pseudomucin and of casein with calcium permanganate, A., i, 104.

Otori, *J.*, picrolonates derived from substances [amines] of physiological importance, A., i, 126.

Otsuki, *C.* See *Julius* **Precht**.

Ott, *Hans*, conversion of Schiff's bases into hydrazones, semicarbazones, and oximes, A., i, 376.

Otto, *Anton*, [analysis of dognácskaite], A., ii, 464.

Otto, *Ernst*, behaviour of salt solutions in the stomach, A., ii, 403.

Otto, *Richard*, manurial experiments with calcium cyanamide and garden plants, A., ii, 196.

Ouvrard, *Léon* [*Victor René*], calcium chloroborates, A., ii, 635.

Overton, *Ernst*, action of salts on muscle and nerve, A., ii, 46.

P.

Paal, *Carl* [*Ludwig*], and *Conrad* **Amberger**, palladium, A., ii, 397.

palladium hydride, A., ii, 397.

colloidal metals of the platinum group. II., A., ii, 397.

rendering active of hydrogen by colloidal palladium, A., ii, 397, 533.

Paal, *Carl*, and *Carl* **Koch**, 3:6-dimethylpyridazine, A., i, 91.

colloidal selenium, A., ii, 158.

the brown and blue modifications of colloidal tellurium, A., ii, 158.

Paal, *Carl*, and *Erich* **Weidenkaff**, action of magnesium phenyl bromide on glycine ethyl ester, A., i, 436.

Padoa, *Maurice*, supposed radioactivity of hydrogen peroxide, A., ii, 624.

Padoa, *Maurice*, and *B.* **Savarè**, nature of iodide of starch, A., i, 416.

Päpke, *Julius*. See *Carl Adam* **Bischoff**.

Paessler, [*Ernst*] *Johannes*, analysis of tanning materials, A., ii, 492.

Paganini, *Pietro*, detection of sawdust in flour and bread, A., ii, 360.

Painter, *C. F.* See *J. E.* **Goldthwait**.

Pajetta, *Raffaello*, iodine numbers of oils, A., ii, 774.

Palazzo, *Francesco Carlo*, action of bromine on ethyl dimethylpyrone-dicarboxylate, A., i, 458.

Palazzo, *Francesco Carlo*, and *A.* **Caldarella**, nitrogen derivatives of acetylcarbinol, A., i, 937.

Palazzo, *Francesco Carlo*, and *Eduardo* **Carapelle**, action of hydroxylamine on ethyl diacetylmalonate, A., i, 858.

Palazzo, *Francesco Carlo*, and *P.* **Onorato**, 3:5-diacetyl-2:6-dimethylpyrone and the constitution of the synthetical γ-pyrone compounds, A., i, 459.

Palazzo, *Francesco Carlo*, and *N.* **Salvo**, action of hydroxylamine on ethyl acetylmalonate, A., i, 858.

Palazzo, *Francesco Carlo*. See also *Alberto* **Peratoner**.

Palladin, *Wladimir*, different origin of the carbon dioxide given off by plants during respiration, A., ii, 751.

Palm, *O. H.* See *Charles Frederic* **Mabery**.

Panek, *Kazimierz*, bacteriological and chemical study of the fermentation of red beet, known as "barszcz," A., ii, 472.

Pannain, *Ernesto*, electrolysis of imides, A., i, 755.

Pantanelli, *Enrico*. See *Ernst* **Winterstein**.

Pappadà, *Nicola*, coagulation of colloidal silicic acid. II., A., ii, 387.

Pariset, hydrolysis of hepatic glycogen produced by injection of amylase into the portal vein, A., ii, 265.

Parke, Davis & Co., preparation of acetyl hydrogen peroxide, A., i, 317.

Parker, *George Howard*, reversal of ciliary movement in Metazoa, A., ii, 183.

reversal of the effective stroke of cilia, A., ii, 542.

Parone, *Ernesto*, sodium derivatives of *n*-propylene glycol, A., i, 731.

Parow, *E.*, influence of acid, steam pressure, and time on the production of dextrose and dextrin in the inversion of potato starch by mineral acids, A., i, 684.

Parravano, *Nicola*. See *Italo* **Bellucci**.

Parsons, *Charles Lathrop*, equilibrium in the system $GlO:SO_3:H_2O$, A., ii, 34.

complexity of glucinum, A., ii, 320.

atomic weights of carbon and glucinum, A., ii, 710.

Pascucci, *Olinto*, composition of the stroma of the blood-discs and hæmolysis, A., ii, 729.

Pasquali, *Adalberto*. See *Icilio* **Guareschi**.

Passamanik, *J.* See *H.* **Cantoni**.

Passon, *Max*, feeding with calcium phosphate, A., ii, 414.

Pastureau, presence of acetylmethylcarbinol in certain commercial vinegars, A., i, 559.

formation of acetol [acetylcarbinol] and pyruvic acid by direct oxidation of acetone, A., i, 572.

Patein, *Gustave* [*Constant*], corrections to be applied in the estimation of lactose in cows' milk and human milk, A., ii, 122.

detection and estimation of antipyrine in pyramidone, A., ii, 658.

Patein, *Gustave*, and *L.* **Daval**, variations in the amount of casein contained in human milk, A., ii, 738.

Patten, *Harrison Eastman*, deposition of aluminium from ethyl bromide solution, A., ii, 36.

Patten, *Harrison Eastman*, and *Wm. Roy* **Mott**, criticism of Clarke's new law in thermochemistry, A., ii, 11.

Patterson, *Thomas Stewart*, the influence of solvents on the rotation of optically active compounds. Part VIII. Ethyl tartrate in chloroform, T., 313; P., 78.

preparation of anhydrides of chloroacetic acids, A., i, 168.

Patterson, *Thomas Stewart*, and *Francis* **Taylor**, studies in optical superposition, T., 33.

the influence of solvents on the rotation of optically active compounds. Part VII. Solution-volume and rotation of menthol and menthyl tartrates, T., 122; P., 15.

Pattinson, *John*, and *John Thomas* **Dunn**, some sources of error in sulphur estimations, A., ii, 199.

Pattinson, *Hugh Salvin*, estimation of sulphur in pyrites by Lunge's method, A., ii, 199.

Pattinson, *Hugh Salvin*, and *George C.* **Redpath**, estimation of zinc in blendes and other natural and artificial products, A., ii, 356.

Paul. See *Alexander* **Tschirch**.

Paul, *David M.* See *Willy* **Marckwald**.

Pauli, *Wolfgang*, physical alterations of colloids. IV. Precipitation of albumin by means of salts of heavy metals, A., i, 496.

Pauly, *Hermann*, action of diazonium compounds on iminazoles, A., i, 494.

Pauly, *Hermann*, and *Arthur* **Binz**, silk and wool as dye producers, A., i, 75.

Pavesi, *Vittorio*, alkaloid from *Papaver dubium*, A., i, 368.

Pawlewski, *Bronislaw von*, synthesis of derivatives of ketoquinazoline, A., i, 246.

derivatives of anthranilic acid, A., i, 437.

Pawlicki, *P.* See *Max* **Scholtz**.

Pécheux, *Hector*, properties of tin-aluminium, bismuth-aluminium, and magnesium-aluminium alloys, A., ii, 526.

Peckham, *Stephen Farnum*, technical analysis of cements, A., ii, 204.

Peckolt, *Theodore*, medicinal and useful plants of Brazil, A., ii, 113.

Pécoul, *Adrien*. See *Albert* **Lévy**.

Peebles, *A. Roy.* See *Arthur Robertson* **Cushny.**

Pégurier, *Gaston*, volumetric estimation of pyramidone and antipyrine in the presence of each other, A., ii, 871.

Pégurier, *Gaston.* See also *A.* **Astruc.**

Pélabon, *Henri* [*Joseph Léonard Ferdinand*], fusibility of mixtures of antimony sulphide with cuprous sulphide and mercuric sulphide, A., ii, 435.

Pellet, *Henri* [*Jean Baptiste*], analysis of refined molasses containing reducing sugars, A., ii, 290.

estimation of phosphoric acid in foodstuffs, A., ii, 353.

estimation of sucrose in presence of lævulose and dextrose, A., ii, 770.

Pellet, *Henri*, and *Ch.* **Fribourg**, sodium nitrate containing perchlorate, A., ii, 115.

occurrence of alumina in plants, A., ii, 860.

estimation of titanic acid in soils and ashes of plants, A., ii, 862.

Pellet, *Henri*, and *L.* **Pellet**, direct estimation of sugar in beet by Pellet's water process; influence of air on the results, A., ii, 210.

estimation of reducing substances in beet-juice, A., ii, 290.

estimation of sucrose in presence of lævulose and dextrose, A., ii, 558.

Pellet, *L.* See *Henri* **Pellet.**

Pellizzari, *Guido*, and *Carlo* **Cantoni**, diaminoguanidine, A., i, 174.

action of cyanogen bromide on hydrazine, A., i, 576.

Pellizzari, *Guido*, and *Angelo* **Soldi**, aliphatic derivatives of 1:2:4-triazole, A., i, 672.

Pembrey, *Marcus Seymour*, and *Richard W.* **Allen**, Cheyne-Stokes respiration, A., ii, 263.

Penfield, *Samuel Lewis*, and *George Samuel* **Jamieson**, tychite, a new mineral; its artificial production and relation to northupite, A., ii, 723.

Pennington, (*Miss*) *Mary Engle.* See *Edgar Fahs* **Smith.**

Peratoner, *Alberto* [*Antonio*], γ-hydroxypyrone and some of its derivatives. I. Non-nitrogenous derivatives, A., i, 806.

Peratoner, *Alberto*, and *Vincenzo* **Castellana**, constitution of hydroxycomenic acid (dihydroxypyronecarboxylic acid), A., i, 806.

Peratoner, *Alberto*, and *Francesco Carlo* **Palazzo**, constitution of comenic acid, A., i, 806.

Peratoner, *Alberto*, and *Rosario* **Spallino** alkyl ethers of pyromeconic acids, A., i, 806.

Peratoner, *Alberto*, and *Antonio* **Tamburello**, constitution of maltol, A., i, 807.

pyridones from pyromeconic acid and maltol, A., i, 807.

Perkin, *Arthur George*, the determination of acetyl groups, T., 107.

the constituents of gambier and acacia catechus. II., T., 398; P., 89.

cyanomaclurin, T., 715; P., 160.

purpurogallin, P., 211.

Perkin, *Arthur George*, and *Maximilian* **Nierenstein**, some oxidation products of the hydroxybenzoic acids and the constitution of ellagic acid, T., 1412; P., 185.

Perkin, *Arthur George*, and *Frederick Mollwo* **Perkin**, the electrolytic oxidation of hydroxybenzoic acids, P., 212.

Perkin, *Frederick Mollwo*, and *W. C.* **Prebble**, electrolytic analysis of cobalt and nickel, A., ii, 207.

Perkin, *Frederick Mollwo.* See also *Herbert Drake* **Law** and *Arthur George* **Perkin.**

Perkin, *William Henry, sen.*, densities, magnetic rotations, and refractive powers of 1:1-dimethylhexahydrobenzene, 1:1-dimethyl-Δ^3-tetrahydrobenzene, and 3-hydroxy-1:1-dimethylhexahydrobenzene, T., 1491.

Perkin, *William Henry, jun.*, the action of ethyl dibromopropanetetracarboxylate on the disodium derivative of ethyl propanetetracarboxylate; a correction, T., 358; P., 90.

Wislicenus memorial lecture, T., 501; P., 17.

synthesis of tertiary menthol and of inactive menthene, P., 255.

Perkin, *William Henry, jun.*, and *Samuel Shrowder* **Pickles**, the reduction of isophthalic acid, T., 293; P., 75.

experiments on the synthesis of the terpenes. Part II. Synthesis of Δ^3-*p*-menthenol(8), $\Delta^{3,8(9)}$-*p*-menthadiene, *p*-menthanal(8), $\Delta^{8(9)}$-*p*-menthene, and *p*-menthane, T., 639; P., 130.

experiments on the synthesis of the terpenes. Part III. Synthesis of aliphatic compounds similar in constitution to terpineol and dipentene, T., 655; P., 131.

Perkin, *William Henry, jun.*, and *Robert* **Robinson**, ethy piperonylacetate, P., 287.

Perkin, *William Henry, jun.*, and *John Lionel* **Simonsen**, the replacement of hydroxyl by bromine, T., 855; P., 188.
the synthetical formation of bridged rings. Part II. Some derivatives of dicyclobutane, P., 256.
Perkin, *William Henry, jun.*, and *George* **Tattersall**, glutaconic acid and the conversion of glutaric acid into trimethylenedicarboxylic acid, T., 361; P., 90.
experiments on the synthesis of the terpenes. Part VI. Derivatives of *m*-cymene, T., 1083; P., 217.
Perkin, *William Henry, jun.* See also *William* **Goodwin**, *Francis William* **Kay**, and *Kōichi* **Matsubara**.
Perman, *Edgar Philip*, the determination of molecular weight by lowering of vapour pressure, T., 194; P., 23; discussion, P., 23.
vapour pressure by air-bubbling, A., ii, 146.
direct synthesis of ammonia, A., ii, 814.
Perotti, *Renato*, employment of calcium cyanamide as manure, A., ii, 196.
use of peat for the transformation of calcium cyanamide into ammoniacal compounds, A., ii, 278.
modification of the method for isolating nitrifying micro-organisms, A., ii, 341.
estimation of cyanamide and its applications, A., ii, 870.
Perrier, *A.*, formation and *rôle* of fatty substances in Fungi, A., ii, 475.
Perrier, *A.* See also *Pierre* **Mazé**.
Perrier, *Gustave*, and *Eugène* **Prost**, an isomeride of trichloroacetone, A., i, 171.
Perrin, *F.* See *Auguste* **Lumière**.
Perrin, *Jean*, contact electrification and colloidal solutions, A., ii, 138.
Perrot, *François Louis*, thermal conductivity of crystalline bismuth, A., ii, 10.
Perrot, *François Louis*. See also *Adrien* **Jaquerod**.
Peschudow, *Wassilij*. See *Carl Adam* **Bischoff**.
Peter, *W.* See *Johannes* **Thiele**.
Peter, *Walter*. See *Carl* **Graebe**.
Peters, *L.* See *Lorenz* **Hiltner**.
Peters, *R.*, estimation of alcohol in fusel oil, A., ii, 768.
Peters, *Walter*, trimethylene-trisulphone and -disulphonesulphide, A., i, 652.
behaviour of aromatic sulphinic acids towards mercuric salts, A., i, 640.
Petersen, *Julius*, reduction of oleic acid to stearic acid by electrolysis, A., i, 678.
qualitative detection of silica, A., ii, 62.
Petit, *Joseph*. See *André* **Brochet**.
Petit, *Paul*, and **Mayer**, reactions of guaiacum resin, A., i, 655.
Petrenko, *G. I.*, catalytic phenomena in the preparation of persulphuric acid, A., ii, 23.
silver-aluminium alloys, A., ii, 635.
Petrenko-Kritschenko, *Pavel Iw.*, [with *Eugen* **Eltschaninoff**, *E.* **Kestner**, and *Th.* **Dolgopoloff**], ketone and aldehyde reactions, A., i, 742.
Petrenko-Kritschenko, *Pavel Iw.*, and *Th.* **Dolgopoloff**, characterisation of aromatic aldehydes and ketones, A., i, 354.
Petri, *Josef*, some new effects produced by radium bromide on a photographic plate, A., ii, 431.
Petrie, *George Ford*, relationship of the pseudo-diphtheria and the diphtheria bacillus, A., ii, 341.
Petrie, *James Mathew*, mineral oil from the torbanite of New South Wales, A., i, 849.
Petrone, *E.* See *Giuseppe* **Kernot**.
Pettit, *J. H.*, and *Ira Obed* **Schaub**, estimation of organic carbon in soils, A., ii, 202.
Peyau, *H.* See *Karl* **Fischer**.
Pfannenstiel, *Adolf*. See *Richard* **Willstätter**.
Pfeiffer, *Hermann*, action of light on mixtures of blood and eosin; action of fluorescent substances (eosin) on normal serum and red blood corpuscles, A., ii, 465.
Pfeiffer, *Otto*, coal testing, A., ii, 767.
Pfeiffer, *Paul*, hydrolysis of stannic chloride and stannic bromide, A., ii, 594.
Pfeiffer, *Paul*, [with *S.* **Basci**], tetramminechromium salts, A., i, 854.
Pfeiffer, *Paul*, [with *Ida* **Heller**], monomethyl-tin derivatives. III., A., i, 123.
Pfeiffer, *Paul*, [with *Ida* **Heller** and *Hunold* **Pietsch**], phenyl derivatives of elements of the phosphorus group, A., i, 164.
Pfeiffer, *Paul*, [and, in part, *Peter* **Koch**, *Towie Gutmann* **Lando**, and *Armin* **Trieschmann**], the stereochemistry of chromium. I., A., i, 33.
Pfeiffer, [*Franz Wilhelm*] *Theodor* [*Christian*], behaviour of salt solutions in the stomach, A., ii, 837.

Pfeiffer, *Theodor, Albert* **Einecke,** and *W.* **Schneider,** effect of asparagine on the production of milk and its constituents, A., ii, 757.

Pflüger, *Eduard* [*Friedrich Wilhelm*], pancreatic diabetes, A., ii, 100.

origin of the sugar excreted in pancreatic diabetes, A., ii, 469.

[glycosuria], A., ii, 844.

Pflüger, *Eduard, Bernhard* **Schöndorff,** and *Friedrich* **Wenzel,** the influence of surgical operations on carbohydrate metabolism, A., ii, 44.

Pfyl, *Balthasar,* estimation of nitric acid in the presence of organic matter, A., ii, 762.

Pfyl, *Balthasar,* and *Bruno* **Linne,** quantitative hydrolysis of saccharose, maltose, lactose, and raffinose, A., ii, 770.

Phelps, *Isaac King,* hydrazine derivatives of tetrachlorophthalic acid, A., i, 528.

Philip, *James Charles,* influence of various sodium salts on the solubility of sparingly soluble acids, T., 987; P., 200.

Philip, *James Charles,* and (*Miss*) *Dorothy* **Haynes,** the dielectric constants of phenols and their ethers dissolved in benzene and *m*-xylene, T., 998; P., 200; discussion, P., 201.

Philip, *James Charles,* and *Sydney Herbert* **Smith,** researches on the freezing points of binary mixtures of organic substances; the behaviour of the dihydric phenols towards *p*-toluidine, α-naphthylamine, and picric acid, T., 1735; P., 255.

Philippe, *Louis.* See *Léon* **Maquenne.**

Phisalix, *C.,* influence of radium emanations on the toxicity of venoms, A., ii, 339.

Piccinini, *Galeazzo,* action of bromine on certain non-saturated compounds, A., i, 598.

Piccinini, *Galeazzo.* See also *Icilio* **Guareschi** and *Giuseppe* **Plancher.**

Pick, *H.* See *Richard* **Abegg.**

Pick, *Hans,* condensation of diphenic anhydride with toluene, A., i, 68.

Pickard, *Robert Howson, William Oswald* **Littlebury,** and *Allen* **Neville,** studies on optically active carbimides. Part II. The reactions between *l*-menthylcarbimide and alcohols, P., 286.

Pickard, *Robert Howson,* and *Allen* **Neville,** optically active reduced naphthoic acids. Part I. *d*-$\Delta^{2(or\ 3)}$-Dihydro-1-naphthoic acid, T., 1763; P., 257.

Pickles, *Samuel Shrowder.* See *William Henry* **Perkin,** *jun.*

Pictet, *Amé,* origin of alkaloids in plants, A., i, 541.

1-methylpyrrolidine from nicotine, A., i, 543.

pyrogenic transformation of methylpyrroles into pyridine derivatives, A., i, 545.

Pictet, *Amé,* and *Max* **Mattisson,** strychnine oxide, A., i, 816.

Pictet, *Amé.* See also *A.* **Bacovescu.**

Picton, *Harold.* See *Ernest* **Linder.**

Pierron, *Paul,* nitrophenylcyanamides, A., i, 125.

Pietsch, *Hunold.* See *Paul* **Pfeiffer.**

Piettre, *M.,* and *Antony* **Vila,** spectroscopic study of oxyhæmoglobin, A., i, 399, 500.

methæmoglobin, A., i, 622.

oxyhæmoglobin of guinea-pigs; action of fluorides, A., ii, 601.

Piettre, *M.* See also *Antony* **Vila.**

Piguet, *Alfred.* See *Fritz* **Foerster** and *Alfred* **Werner.**

Pildon, *Lasar.* See *Carl Adam* **Bischoff.**

Pilz, *Ferdinand,* siphon with a mercury valve, A., ii, 155.

Pinagel, *Alfred.* See *Carl* **Friedheim.**

Pinner, *Adolf,* pilocarpine. VI., A., i, 463.

glyoxalines, A., i, 476.

pilocarpine and its transformation into a new modification, A., i, 658.

Pinner, *Adolf,* and *A.* **Franz,** influence of indifferent solvents on the alkylation of organic bases, A., i, 466.

Pinoff, *Erw.,* Tollen's phloroglucinol and hydrochloric acid reaction for pentoses, A., ii, 289.

spectroscopic and colour reactions of important sugars, A., ii, 865.

Pintza, *Alexandre.* See *Philippe A.* **Guye.**

Pirani, *Marcello von,* tantalum and hydrogen, A., ii, 718.

Pissarjewsky, *Leo W.,* magnitude of the equilibrium of the same reaction in different solvents, A., ii, 16.

Pissarjewsky, *Leo W.,* and *N.* **Lemcke,** influence of the solvent on the equilibrium constant, and the relationship between electric conductivity and viscosity, A., ii, 684.

Pitman, *John Edmund.* See *David Runciman* **Boyd.**

Piutti, *Arnaldo,* and *E.* **Stoppani,** presence of bismuth in pyrites from Agordo, A., ii, 718.

Plancher, *Giuseppe,* and *Giuseppe* **Barbieri,** electrolytic preparation of ceric ammonium nitrate, A., ii, 250.

Plancher, *Giuseppe*, and *A.* **Caravaggi**, transformation of pyrrole into indoles; synthesis of 4:7-dimethylindole, A., i, 298.

Plancher, *Giuseppe*, and *Oreste* **Carrasco**, action of chloroform on 2:3-dimethylindole; transformation of pyrrole into pyridine, A., i, 298.

action of chloroform on 1:2:3-trimethylindole, A., i, 666.

3-ethylindole and 1:3:3-triethyl-2-e hylideneindoline, A., i, 719.

Plancher, *Giuseppe*, and *Galeazzo* **Piccinini**, compounds of β-phenylhydroxylamine with aromatic aldehydes, A., i, 705.

Plancher, *Giuseppe*, and *C.* **Ravenna**, oxidation of pyrrole to maleimide, A., i, 333.

indoline, A., i, 611.

assimilation of carbon by plants. I. Supposed formation of formaldehyde, A., ii, 191.

Planès, *Paul*, colorimetric estimation of hydrogen peroxide, A., ii, 199.

Plangger, *Alois*, new indoline bases, A., i, 718.

Platz, *Ludwig*. See *Walter* **Dieckmann**.

Plaut, *Georg*. See *Otto* **Diels**.

Playfair, (*Lord*) *Lyon*, obituary notice of, T., 600.

Plimmer, *Robert Henry Aders*, formation of hydrogen cyanide by the oxidation of proteids, A., i, 162.

Plotnikoff, *Joh.*, a rule in chemical dynamics, A., ii, 376.

relation between the logarithmic temperature constant and heat evolution, A., ii, 571.

Plotnikoff, *Wladimir A.*, compounds of dimethylpyrone with trichloroacetic acid, A., i, 77.

electrical conductivity of ethereal solutions of phosphoric acid, A. ii, 135.

electrical conductivity of solutions in ethyl bromide; compounds of dimethylpyrone with acids, A., ii, 433.

Pochettino, *Alfredo*, cathode luminescence of crystals, A., ii, 430.

Pogorželsky, *S. A.*, action of chlorine on isobutylene, A., i, 165.

action of bromine on isobutylene, A., i, 315.

Pohl, *Richard*. See *Max* **Dittrich**.

Pohl, *Wilhelm*. See *Max* **Bodenstein**.

Polenske, *Eduard*, testing lard and butter, A., ii, 870.

testing lard, A., ii, 870.

Pollacci, *Gino*, new apparatus for gas analysis, A., ii, 478.

Pollack, *Walter von*, condensation of aminobenzoic acids with ethyl malonate, A., i, 353.

Pollak, *Jacques*. See *Josef* **Herzig**.

Pollak, *Leo*, oxidation products of glycylglycine, A., i, 750.

the individuality of trypsin, A., ii, 47.

Pomeranz, *H.*, action of alkali [hydroxides] on sulphur, A., ii, 698.

Poni, *Petrus*, and *N.* **Costachescu**, isohexanes in Roumanian petroleum, A., i, 109.

Ponndorf, *Georg*. See *Paul* **Duden**.

Pontio, *Maurice*, detection and estimation of bitumen in gutta percha, A., ii, 362.

Ponzio, *Giacomo*, new acids of the oleic series. II. Δ^{α}-Hypogæic acid, A., i, 405.

new acids of the oleic series. III. Derivatives of Δ^{α}-oleic acid, A., i, 736.

Pool, *Johan F. A.*, [chloroacetic acids], A., i, 404.

laboratory notes [chloroacetic acids and their estimation and separation], A., ii, 425.

Popp, *M.* See *Albin* **Köhler**.

Porcher, *Charles*, sugar in the blood during parturition in the goat deprived of its mammary glands, A., ii, 469.

animal lactase, A., ii, 540.

origin of lactose; removal of the mammary glands during lactation, A., ii, 600.

origin of lactose; effects of injections of dextrose during lactation, A., ii, 739.

Porcher, *Charles*, and *Ch.* **Hervieux**, pigments originating from scatole and the scatoxyl question, A., ii, 187.

scatole, A., ii, 740.

Porlier, *A.*, composition of a cannon ball from the moat of the Bastille, A., ii, 713.

Posner, *E. R.*, and *William John* **Gies**, protagon, A., i, 252.

Posner, *Theodor*, *p*-amino-acids, A., i, 577.

β-amino-β-phenylpropionic acid, A., i, 776.

sulphonalcarboxylic acids, and the physiological activity of acid and basic derivatives of sulphonal, A., i, 852.

Posner, *Theodor*, [with *J. S.* **Tscharno**], unsaturated compounds. II. Addition of mercaptans to unsaturated hydrocarbons, A., i, 279.

Posternak, *Swigel*, composition and signification of aleurone grains, A., ii, 276.

Potter, *Charles Etty*. See *Hooper Albert Dickinson* **Jowett**.

Pottevin, *Henri*, bacteriology of infectious gastro-enteritis, A., ii, 748.

Power, *Frederick Belding*, and *Marmaduke* **Barrowcliff**, the constituents of the seeds of *Hydnocarpus Wightiana* and of *Hydnocarpus anthelminthicus*. Isolation of a homologue of chaulmoogric acid, T., 884; P., 175.

the constituents of the seeds of *Gynocardia odorata*, T., 896; P., 176.

Power, *Frederick Belding*, and *Frederic Herbert* **Lees**, gynocardin, a new cyanogenetic glucoside, T., 349; P., 88.

Power, *Frederick Belding*, and *Frank* **Tutin**, the relation between natural and synthetical glycerylphosphoric acids, T., 249; P., 72.

Pozzi-Escot, *Marius Emmanuel*, azo-derivatives of 3:3′-dihydroxy-2:2′-dinaphthyl and 3:3′-dihydroxy-1:1′-dinaphthyl, A., i, 101.

study and synthetical preparation of arylthiohydantoins, A., i, 159.

new characteristic reaction of cobalt, A., ii, 423.

Praetorius, *Arthur*, hydrolysis of methyl benzenesulphonate, A., i, 186.

Prager, *Bernhardt*, azo-derivatives of ethyl oxalocrotonate, A., i, 391.

Prager, *Bernhardt*. See also *Cl.* **Flamand**.

Prandtl, *Wilhelm*, the spitting of alkali vanadates, A., ii, 170.

Prandtl, *Wilhelm*, [with *Fritz* **Lustig**], complex compounds of quinquevalent vanadium with quadrivalent elements, A., ii, 395.

Prebble, *W. C.* See *Frederick Mollwo* **Perkin**.

Precht, *Julius*, and *C.* **Otsuki**, radiation from hydrogen peroxide, A., ii, 296.

sensitiveness of photographic action due to hydrogen peroxide, A., ii, 495.

Precht, *Julius*, and *Erich* **Stenger**, fundamental principles of three-colour photography, A., ii, 566.

energy of chemical radiation through three-colour filters, A., ii, 566.

radiation-sensitiveness of silver bromide gelatin for white, green, and orange light, A., ii, 566.

Pregl, *Fritz*, carboxyhæmochromogen, A., i, 622.

Pregl, *Fritz*, cause of the fluorescent reaction of bile acids with sulphuric acid, A., i, 728.

estimation of carbon and hydrogen in organic compounds, A., ii, 420.

Pregl, *Fritz*. See also *Emil* **Abderhalden**.

Pretzell, *Carl*. See *Wilhelm* **Autenrieth**.

Preuner, *Wilhelm*. See *August* **Michaelis**.

Prianischnikoff, *Dmitri N.*, effects of ammonium salts on the assimilation of phosphoric acid by higher plants, A., ii, 413.

Price, *Thomas Slater*, Caro's permonosulphuric acid, P., 299.

Prideaux, *Edmund Brydges Rudhall*, note on the fluorides of selenium and tellurium, P., 238; discussion, P., 239.

note on bromine fluoride, P., 240.

Prideaux, *Edmund Brydges Rudhall*. See also *Clive* **Cuthbertson**.

Priestley, *J. G.* See *John Scott* **Haldane**.

Pring, *John Norman*, the reduction of metallic oxides by aluminium carbide, T., 1530; P., 230.

Pringsheim, *Hans H.*, coloured and colourless di-imines, A., i, 934.

fusel oil, A., ii, 274.

origin of fusel oil; an alcohol-producing bacterium, A., ii, 848.

Pringsheim, *Hans H.*, and *James A.* **Gibson**, use of sodium peroxide in the analysis of organic substances. II., A., ii, 609.

Prior, *Eugen*, barley, A., ii, 277.

Proctor, *Charles*, the estimation of saccharin, T., 242; P., 62.

Prost, *Eugène*. See *Gustave* **Perrier**.

Prud'homme, *Maurice*, action of formaldehyde and sodium hydrogen sulphite on aromatic diamines, A., i, 548.

constitution of hyposulphites, A., ii, 157.

Prym, *Oscar*, spleen and pancreas. II., A., ii, 404.

Przibylla, *Carl*. See *Wilhelm* **Feit**.

Pschorr, *Robert* [*Franz*], stable quaternary salts of apomorphine, A., i, 658.

thebainone: a ketone obtained by reduction of thebaine, A., i, 920.

Pschorr, *Robert*, and *Hans* **Einbeck**, 2-β-aminoethylphenol and its methyl ether, A., i, 589.

Pschorr, *Robert*, and *E.* **Kuhtz**, constitution of α-naphthindole, A., i, 236.

Pschorr, *Robert.* See also *Ludwig* **Knorr.**
Puccianti, *Luigi*, fluorescence of sodium vapour, A., ii, 131.
Puckner, *William August*, sodium hydrogen carbonate in iodometry, A., ii, 415.
estimation of acetanilide, A., ii, 871.
estimation of caffeine, A., ii, 872.
Pummerer, *Rudolf.* See *Richard* **Willstätter.**
Purdie, *Thomas*, and *James Colquhoun* **Irvine**, synthesis from glucose of an octamethylated disaccharide. Methylation of sucrose and maltose, T., 1022; P., 215.
Purucker, *Georg.* See *Albert* **Reichard.**
Purvis, *John Edward*, the influence of very strong electromagnetic fields on the spark spectra of ruthenium, rhodium, and palladium, P., 241.
Pushin, *Nicolai A.*, co-ordinates of the melting-point curve, change of volume and heat of crystallisation of $Cd(NO_3)_2,4H_2O$ in relation to pressure, A., ii, 587.
Pushin, *Nicolai A.*, and *R. M.* **Trechzinsky**, methods of electro-analysis, A., ii, 607.
Puxeddu, *Ernesto.* See *Giuseppe* **Oddo.**

Q.

Quartaroli, *Antonio*, gradual dissociation of mellitic acid, A., i, 652.
action of vegetable acids on phosphates, A., ii, 549.
equilibrium among certain bases in simultaneous contact with phosphoric acid, A., ii, 821.
Quenda, *Enrico.* See *Icilio* **Guareschi.**
Quennessen, *L.*, absorption of hydrogen by rhodium, A., ii, 42.
comparative absorption of hydrogen by rhodium and palladium, A., ii, 172.
separation of platinum and iridium, A., ii, 615.
potassium iridochloronitrite, A., ii, 640.

R.

Rabak, *Frank*, resin oil of *Pinus longifolia*, A., i, 911.
Rabaut, *Pierre Charles.* See *Jules* **Aloy.**
Rabe, *Paul* [*Carl Ludwig*], and *Fritz* **Rahm**, constitution of the so-called Hagemann's ester, A., i, 348.
Rabe, *Paul*, and *Karl* **Ritter**, derivatives of meroquinine. I., A., i, 811
Raby, *L.*, variations in the rotatory power of oil of turpentine, A., ii, 423.
Radik, *Julius.* See *Carl Adam* **Bischoff.**
Rahm, *Fritz.* See *Paul* **Rabe.**
Rahn, *Otto*, sensitiveness of putrefactive and lactic acid bacteria towards poisons, A., ii, 189.
decomposition of fats, A., ii, 647.
Raikow, *Paul N.*, state of combination of sulphur in proteids, A., i, 725.
action of carbon dioxide on the hydroxides and carbonates of the metals of the alkalis and alkaline earths, A., ii, 85.
detection of nitrous and nitric acids when occurring together and their approximate estimation by means of diphenylamine, A., ii, 283.
Rainer, *J.*, the aldol from synthetic isopropylacetaldehyde [isovaleraldehyde], A., i, 16.
Rakusin, *M. A.*, apparatus for determining the specific gravity of solid fats and waxes, A., ii, 303.
synthesis of naphtha and its origin, A., ii, 328.
optical examination of naphtha and of its distillation products. II., A., ii, 358.
behaviour of Pennsylvanian naphtha and its products towards polarised light, A., ii, 398.
optical activity of the more important vegetable oils, A., ii, 619.
modified Gintl pyknometer, A., ii, 802.
Ramsay, (*Sir*) *William*, decomposition of water by radium, A., ii, 665.
a new element, radiothorium, the emanation of which is identical with that of thorium, A., ii, 789.
determination of the amounts of neon and helium in atmospheric air, A., ii, 817.
Ramsbottom, *John Edwin.* See *Samuel* **Chadwick.**
Ramsden, *W. B.*, two new aldehyde reactions, A., ii, 770.
Ranfaldi, *G.* See *Pasquale* **Bertolo.**
Ransohoff, *F.* See *Alexander* **Gutbier.**
Rapalje, *Walter S.* See *John Charles* **Olsen.**
Raper, *Henry Stanley*, formation of fatty acids from lactic acid when fused with alkali hydroxides, A., i, 405.
Raschig, *Fritz*, theory of the lead chamber process. II., A., ii, 23, 700.
[volumetric] estimation of phosphoric acid, A., ii, 284, 553.

Rasetti, *P.*, constitution of hexyl iodide from mannitol, A., i, 558.
methylbutylacetic [α-methylhexoic] acid, A., i, 561.
ethylpropylacetic [α-ethylvaleric] acid, A., i, 562.
Raske, *Karl.* See *Emil* **Fischer.**
Rath, *C.* See *Carl* **Mai.**
Rauchwerger, *Dora.* See *Carl* **Neuberg.**
Raumer, *Ed. von*, use of fermentation methods for the analysis of starch syrup, A., ii, 618.
Raveau, *C.*, state of matter in the neighbourhood of the critical point, A., ii, 628.
Ravenna, *C.* See *Giuseppe* **Plancher.**
Rây, *Prafulla Chandra*, the sulphate and the phosphate of the dimercurammonium series, T., 9.
theory of the production of mercurous nitrite and of its conversion into various mercury nitrates, T., 171.
Rây, *Prafulla Chandra*, [and *Atul Chandra* **Gañguli**], the nitrites of the alkali metals and metals of the alkaline earths and their decomposition by heat, T., 177.
the constitution of nitrites. Part I. Two varieties of silver nitrite, P., 278.
Rayleigh, [*John William* **Strutt**], (*Lord*), compressibility of gases between one atmosphere and half an atmosphere of pressure, A., ii, 232, 373.
Raynaud. See *William* **Oechsner de Coninck.**
Recoura, *Albert*, basic ferric sulphate, A., ii, 527.
hydrolysis of concentrated solutions of ferric sulphate, A., ii, 527.
transformations of hydrated ferric sulphate, A., ii, 590.
Redpath, *George C.* See *Hugh Salvin* **Pattinson.**
Reeb, *E.* See *Frédéric* **Schlagdenhauffen.**
Regensburger, *P.* See *C.* **Bleisch.**
Reich, *Albert*, action of acid amides on aldehydes, A., i, 35.
Reich, *Max*, action of acetamide on aldehydes, and of formamide on acetophenone, A., i, 35.
Reichard, *Albert*, and *Georg* **Purucker**, estimation of extract in barleys, A., ii, 428.
Reichard, *C.*, alkaloid reactions; morphine, A., ii, 68.
reactions of cocaine and morphine, A., ii, 127.
alkaloid reactions; quinine and cinchonine, A., ii, 561, 659.
Reichard, *C.*, alkaloid reactions; nicotine and coniine, A., ii, 563.
alkaloid reactions; sparteine, coniine, nicotine, A., ii, 563.
detection and estimation of sodium in presence of lithium by means of hydrofluosilicic acid, A., ii, 653.
alkaloid reactions, A., ii, 659.
alkaloid reactions; amorphous aconitine, A., ii, 777.
alkaloid reactions; veratrine (puriss. German Pharmacopœia IV.), A., ii, 871.
Reichenheim, *O.* See *Johann Georg* **Koenigsberger.**
Reid, *Ebenezer Emmet.* See *Horace Greeley* **Byers.**
Reid, *Edward Waymouth*, osmotic pressure of hæmoglobin solutions, A., i, 846.
Reid, *Herbert J.* See *Paul* **Duden.**
Reiff, *Hermann J.*, measurement of high vacua in chemical distillation, A., ii, 808.
Reimer, *Marie.* See *Ferdinand Willy* **Hinrichsen** and *Elmer Peter* **Kohler.**
Reinbach, *Hans.* See *Theodor* **Zincke.**
Reinbold, *B.* See *Gustav von* **Hüfner.**
Reinbold, *Béla.* See *Emil* **Abderhalden.**
Reinganum, *Max*, determination of the density of chlorine at high temperatures, A., ii, 810.
Reinicke, *Gustav*, action of ethyl sodiomalonate on sodium salts of unsaturated acids, A., i, 787.
Reinking, *Karl*, *Erich* **Dehnel**, and *Hans* **Labhardt**, constitution of aldehydesulphurous acid and hyposulphurous acid, A., i, 261.
Reintke, *Eugen.* See *Augustin* **Bistrzycki.**
Reisch, *Rudolf*, production of acetic acid in alcoholic fermentation, A., ii, 548.
Reise, *Adolf.* See *Max* **Dittrich.**
Reiss, *Emil*, behaviour of ferments towards colloidal solutions, A., i, 956.
the catalase of milk, A., ii, 337.
Reiss, *Rudolf*, insoluble basic aluminium acetate, A., i, 852.
Reissert, [*Carl*] *Arnold*, introduction of the benzoyl group into tertiary cyclic bases, A., i, 472, 925.
Reissert, *Arnold*, and *W.* **Engel**, dibenzoylethane-2:2′-dicarboxylic acid and its anhydride, A., i, 898.
Reissert, *Arnold*, and *Georg* **Goll**, quinoxaline and beziminazole compounds from 4-nitro-2-aminodiphenylamine, A., i, 247.
Reissert, *Arnold*, and *Hans* **Heller**, reduction products of ethyl 2:4-dinitrophenylacetoacetate, A., i, 59.

Reitter, *Hans*, and *Friedrich* **Bender**, phenylhydrazine derivatives of aconic acid, A., i, 669.

Reitzenstein, *Fritz*, and *Otto* **Runge**, influence of the position of methyl and nitro-groups relatively to the methane carbon atom on the colours of triphenylmethane dyes, A., i, 300.

Remfry, *Percy*. See *Herman* **Decker**.

Rendle, *Theodore*. See *Arthur Robert* **Ling**.

Rengade, *Étienne*, cæsium methylamide, A., i, 174.

action of ethylamine and isobutylamine on cæsium, A., i, 634.

cæsamide, A., ii, 388.

action of oxygen on cæsium-ammonium, A., ii, 521.

Renouf, (*Miss*) *Nora*. See *Arthur William* **Crossley**.

Report of the Committee (of the German Chemical Society) for fixing atomic weight, A., ii, 155, 308.

Report of the International Committee on atomic weights, P., 2.

Report of the Committee on uniformity in analysis. I., A., ii, 197.

Report of the Council, T., 535; P., 99.

Resenscheck, *F.* See *Karl A.* **Hofmann**.

Resenscheck, *Friedrich*. See *Alexander* **Gutbier**.

Reuss, *A. von*. See *Friedrich* **Hamburger**.

Reuter, *Ferd*. See *Emil* **Fischer**.

Reverdin, *Frédéric*, and *Auguste* **Dresel**, mononitro-derivatives of *p*-aminophenol, A., i, 51.

dinitro-derivatives of *p*-aminophenol, A., i, 430.

Reynolds, *James Emerson*, silicon researches. Part IX. Bromination of silicophenyl-imide and -amide, and formation of a compound including the group, SiN, T., 1870; P., 249.

Rey-Pailhade, *Joseph* [*Charles François*] *de*, philothionic hydrogen, A., i, 728.

Rhodin, *John Gustaf Adolf*, mass analyses of Muntz metal by electrolysis; electrolytic properties of the alloy, A., ii, 483.

Rhoussopoulos, *Petros*. See *Otto* **Wallach**.

Richards, *Francis E.* See *Gilbert Thomas* **Morgan**.

Richards, *Theodore William*, efficiency of centrifugal purification, A., ii, 238.

Richards, *Theodore William*, *Lawrence Joseph* **Henderson**, and *George S.* **Forbes**, elimination of thermometer lag and casual loss of heat in calorimetry, A., ii, 677.

Richards, *Theodore William*, and *Burritt S.* **Lacy**, electrostenolysis and Faraday's law, A., ii, 299.

Richards, *Theodore William*, and *Roger Clark* **Wells**, revision of the atomic weights of sodium and chlorine, A., ii, 450.

Richardson, *Clifford*. See *William Francis* **Hillebrand**.

Richardson, *Owen Willans*, diffusion of hydrogen through palladium, A., ii, 233.

Richet, *Charles*, thalassin, the poison of sea anemones, A., ii, 746.

Richmond, *Henry Droop*, composition and analysis of milk, A., ii, 869.

Richter, *L.* See *Friedrich* **Nobbe**.

Richter, *Paul Friedrich*. See *Peter* **Bergell**.

Riddick, *David Gibson*. See *John H. B.* **Jenkins**.

Riedel, *J. D.*, iodo-derivatives of lecithin, A., i, 164.

identification of lecithin, A., ii, 428.

Riegler, *Emanuel*, new reagent for the detection of the colouring matters of blood or their products of decomposition, A., ii, 128.

Rieke, *Reinhold*. See *Conrad* **Willgerodt**.

Riesenfeld, *Ernst Hermann*, [with *William Adelbert* **Kutsch** and *Herman* **Ohl**], decomposition of chromic acid by means of hydrogen peroxide, A., ii, 825.

Riesenfeld, *Ernst Hermann*, [with *William Adelbert* **Kutsch**, *Herman* **Ohl**, and *Hans Emil* **Wohlers**], perchromic acids, A., ii, 824.

Riesenfeld, *Ernst Hermann*, *Hans Emil* **Wohlers**, and *William Adelbert* **Kutsch**, higher oxidation products of chromium, A., ii, 461.

Riesenfeld, *Hans*, and *Fritz* **Taurke**, cellulose, A., i, 746.

Riess, *Gustav*. See *Carl* **Bülow**.

Rietz, *E.* See *Karl* **Auwers**.

Righi, *Augusto*, radioactivity of the common metals, A., ii, 431.

electrification produced by radium rays, A., ii, 792.

diminution of resistance produced in bad conductors by radium rays, A., ii, 793.

Riiber, *C. N.*, formation of isomeric hydrocinnamylideneacetic acids, A., i, 777.

Rimatori, *Carlo*, gravimetric and spectroscopic analysis of zinc blendes from Sardinia, A., ii, 598.

Rimbach, [*Friedrich*] *Eberhard*, and *Adolf* **Grewe**, solubility and dissociation of double salts in water. IV. and V., A., ii, 375.

Rimbach, *Eberhard,* and *Otto* **Weber,** action of inorganic substances on the rotation of lævulose and dextrose, A., i, 416.

Rimini, *Enrico,* myristicin, A., i, 198, 656.

Rinck, *Arthur.* See *Max* **Busch.**

Ringer, *Wilhelm Eduard.* See *Willem Paulinus* **Jorissen.**

Ringleben, *O.* See *Wilhelm* **Schneidewind.**

Rinman, *Erich L.,* bistriazole compounds, A., i, 387.

Rintelen, *P.* See *Josef* **König.**

Ritter, *Adolf.* See *Otto* **Frank.**

Ritter, *Karl.* See *Paul* **Rabe.**

Rivier, *Henri.* See *Otto C.* **Billeter.**

Roaf, *Herbert E.,* and *E. S.* **Edie,** preparation and estimation of lecithin, A., ii, 364.

Roaf, *Herbert E.* See also *Benjamin* **Moore.**

Roberts, *David James.* See *John Joseph* **Sudborough.**

Robertson, *Philip Wilfred,* studies in comparative cryoscopy. Part III. The esters in phenol solution, T., 1574; P., 231.

a volumetric method of estimating the cinchona alkaloids by means of their double thiocyanates, P., 242.

Robertson, *William,* solubility as a measure of the change undergone by isodynamic hydrazones; (1) camphorquinonephenylhydrazone, (2) acetaldehydephenylhydrazone, T., 1298; P., 181.

Robertson, *William.* See also *Henry Edward* **Armstrong.**

Robin, *Lucien,* detection and estimation of citric acid in wines, A., ii, 124.

Robinson, *Robert.* See *William Henry* **Perkin,** *jun.*

Robyn, *A.,* dinaphthapyranic (dinaphthaxanthyl) derivatives containing nitrogen, A., i, 608.

Robyn, *A.* See also *Robert* **Fosse.**

Roche, *Raoul.* See *L.* **Freyssinge.**

Rockwood, *Elbert William.* See *Lafayette Benedict* **Mendel.**

Rocques, *Xavier,* composition of wine brandies, A., ii, 275.

colorimetric estimation of higher alcohols in brandies, A., ii, 359.

estimation of glycerol in liqueur wines, A., ii, 769.

Rodano, *G. A.* See *Celso* **Ulpiani.**

Rodenberg, *G.* See *Heinrich* **Frerichs.**

Roederer, strontium-ammonium, A., ii, 455.

Röhmann, *Franz,* lanocerin, A., ii, 842.

Röhrig, *Armin,* improved apparatus for use in the Gottlieb-Röse method of estimating fat in milk, A., ii, 490.

Römer, *Hermann,* results of experiments on the action of phosphoric acid on sugar beet, A., ii, 757.

Rössing, *Adelbert,* decomposition products formed from starch by hydrolysis with hydrochloric acid; their estimation in starch-dextrose and syrups, and their influence on the technical value of syrups, A., i, 684.

Rössler, *Emil.* See *Erwin* **Rupp.**

Roettgen, *Theodor.* See *Karl* **Windisch.**

Rogers, *Allen,* and *Edgar Fahs* **Smith,** derivatives of complex inorganic acids, A., ii, 38.

Rogers, *Leonard,* blood changes in plague, A., ii, 338.

Rogerson, *Harold,* and *Jocelyn Field* **Thorpe,** some alkyl derivatives of glutaconic acid and of 2:6-dihydroxypyridine, T., 1685; P., 239.

Rogoff, *Moissei J.,* phenols insoluble in aqueous alkali hydroxides, A., i, 883.

Rogowicz, *Johann,* solubility of barium sulphite in water and in [sucrose] solutions, A., ii, 821.

Rohde, *Erwin,* colour reactions of proteids with *p*-dimethylaminobenzaldehyde and other aromatic aldehydes, A., i, 618.

Rohde, *Georg,* and *G.* **Schwab,** action of methyl iodide on the isonitroso-compounds of cinchotoxine and quinotoxine, A., i, 228.

Rohland, *Paul* [*Waldemar*], hydration and hardening, A., ii, 19, 389, 511.

relationships between the solubility of calcium sulphate and the hydration of gypsum and of Portland cement, A., ii, 319.

the clays as semipermeable walls, A., ii, 683.

Rohrer, *Ladislaus von,* electrometric determination of the acidity of urine, A., ii, 772.

Rolle, *Otto.* See *Daniel* **Vorländer.**

Romanoff, *E.,* action of potassium hydroxide on a mixture of phenylacetylene and menthone, A., i, 775.

Romeo, *Giovanni,* nitrobenzyl ethers, A., i, 435.

Romeo, *Giovanni,* and *C.* **Marchese,** reduction products of di-*p*-nitrobenzylmalononitrile, A., i, 441.

Rona, *Peter.* See *Emil* **Abderhalden.**

Roncagliolo, *Cesare,* hydrazine derivatives of *o*-aminobenzaldehyde, A., i, 652.

Root, *Jay Emery,* electrolysis of cobalt and nickel tartrates, A., ii, 208.

Roozeboom, *Hendrik Willem Bakhuis*, and *A. H. W.* **Aten**, equilibria between solid and liquid phases in ternary systems which are pseudo-binary; explanation of anomalous fusion and solution phenomena, A., ii, 803.

Roozeboom, *Hendrik Willem Bakhuis*, and *J.* **Olie**, *jun.*, solubilities of the isomeric chromic chlorides, A., ii, 716.

Rose, *Robert.* See *Hans* **Stobbe**.

Rose, *Thomas Kirke*, certain properties of the alloys of silver and cadmium, A., ii, 86.

Rosenheim, *Arthur*, [formula for aldehyde hydrogen sulphites], A., i, 508.

Rosenheim, *Arthur*, and *Hans J.* **Braun**, halogen compounds of molybdenum and tungsten, A., ii, 717.

Rosenheim, *Arthur*, and *Paul* **Frank**, [zirconichlorides of organic bases], A., i, 297.

zirconium salts, A., ii, 256.

Rosenheim, *Arthur*, and *Walter* **Levy**, platinum phosphorus halogen compounds and their derivatives. II., A., i, 183.

Rosenheim, *Arthur*, and *Willfried* **Sarow**, salts of alkylsulphurous and alkylsulphonic acids, A., i, 404.

Rosenheim, *Arthur*, and *Richard* **Schnabel**, action of stannic and titanic chlorides on organic hydroxyl compounds, A., i, 731.

Rosenheim, *Arthur*, and *Wilhelm* **Stadler**, formation of complex salts with thio-acids. II. Thiolmalic acids and their salts, A., i, 740.

Rosenheim, *Otto*, the methylation of gallotannic acid, P., 157.

Rosenthaler, *Leopold*, iron compounds of salicylic acid, A., i, 47.

pentose reactions of saponins, A., i, 539.

the vanillin-hydrochloric acid reaction, A., ii, 489.

Rossi, *Carlo*, electrolysis with alternating current, A., ii, 137.

Rossi, *Dominik.* See *Carl Adam* **Bischoff**.

Rossi, *Emilio*, new method for preparing oxides of nitrogen, and hence nitric acid, from compressed air by electric means, A., ii, 386.

Rossolimo, *A. I.*, the oxidising action of impure ether, A., i, 295.

Rost, *Arnold.* See *Stanislaus von* **Kostanecki**.

Rostoski, *Otto.* See *Emil* **Abderhalden**.

Rotarski, *Th.*, reduction of nitro-compounds by alcohols in presence of alkali, A., i, 765.

Rotarski, *Th.* See also *Friedrich* **Dreyer**.

Roth, *Paul.* See *Ludwig* **Knorr**.

Rothberger, *C. J.*, and *Heinrich* **Winterberg**, poisonous symptoms in dogs with Eck's fistula, A., ii, 408.

Rothe, *W.* See *Albert* **Stutzer**.

Rothera, *C. H.*, relation of cystine to sulphur metabolism, A., ii, 267.

Rothstein, *J. M.*, boiler deposits, A., ii, 389.

Rousseaux, *E.* See *Charles* **Girard**.

Roux, *Eugène*, reversion of amylocellulose into starch, A., i, 262.

reversion of artificial starches, A., i, 328.

saccharification of artificial starches by malt, A., i, 624.

Roux, *Eugène.* See also *Léon* **Maquenne**.

Rowland, *James Scott*, and *Llewellyn John* **Davies**, estimation of phosphorus in iron ores, A., ii, 116.

Rozzi, *A.* See *Alberto* **Chilesotti**.

Rubner, *Max*, and *Otto* **Heubner**, natural nourishment of infants, A., ii, 403.

Rubow, *V.*, lecithin in heart and kidneys in the normal condition, during starvation, and in fatty degeneration, A., ii, 336.

Rubricius, *Hans*, estimation of manganese in irons and steels by the persulphate method, A., ii, 766.

Rudge, *W. A. Douglas*, properties of radium in minute quantities, A., ii, 496.

Rudolfi, *E.* See *Leopold* **Rügheimer**.

Rudorf, [*Carl Casimir*] *George*, spectrum regularities and the atomic weight of radium, A., ii, 69.

Rudse, *Friedrich.* See *Stanislaus von* **Kostanecki**.

Rücker, *Adolf.* See *Alexander* **Naumann**.

Rueger, *Charles E.*, change of colour caused by the action of certain rays on glass, A., ii, 709.

Rügheimer, *Leopold*, molecular weight of bismuth phosphate, A., ii. 576.

Rügheimer, *Leopold*, and *E.* **Rudolfi**, molecular weights of metallic chlorides, A., ii, 576.

Rügheimer, *Leopold*, [with *Siegfried Toeche* **Mittler** and *E.* **Rudolfi**], determination of molecular weight by use of solvents with high boiling points, A., ii, 571.

Rühl, *Friedrich.* See *Paul* **Jannasch**.

Ruer, *Rudolf*, zirconium salts; constitution of normal zirconium sulphate, A., ii, 41.

electrolytic solution of platinum, A., ii, 137.

condition in which chlorine exists in colloidal solutions of metallic hydroxides, A., ii, 169.

Ruer, *Rudolf*, metazirconic acid, A., ii, 256.
electrolytic dissolution of platinum, A., ii, 795.
zirconium oxychloride as a means of testing for zirconium, A., ii, 863.
Ruer, *Rudolf*, and *Max* **Levin**, zirconium-sulphuric acids, A., ii, 827.
Ruff, *Otto*, and *Kurt* **Albert**, the action of silicochloroform on some fluorides and the preparation and properties of silicofluoroform, A., ii, 161.
Ruff, *Otto*, and *Kurt* **Albert**, [and, in part, *Emil* **Geisel**], silicochloroform, A., ii, 518.
Ruff, *Otto*, [with *Hans* **Einbeck**, *Georg* **Fischer**, and *Kurt* **Thiel**], the chlorides of sulphur; sulphur tetrachloride and its compounds, A., ii, 22.
Ruff, *Otto*, and *Fritz* **Eisner**, tungsten hexafluoride, A., ii, 255.
Ruff, *Otto*, and *Emil* **Geisel**, sulph-ammonium and its relation to nitrogen sulphide, A., ii, 699.
Ruff, *Otto*, and *Willi* **Jeroch**, iodometric estimation of sulphurous acid in alkaline solution, A., ii, 200.
Ruff, *Otto*, and *Otto* **Johannsen**, boiling points of the alkali metals, A., ii, 818.
Ruff, *Otto*, and *Kurt* **Thiel**, action of hydrogen fluoride on nitrogen sulphide, and a new method of formation of thionyl fluoride, A., ii, 160.
Ruhemann, *Siegfried*, the combination of mercaptans with olefinic ketonic compounds, T., 17, 461; P., 123.
Ruhemann, *Siegfried*, and *Richard William* **Merriman**, the action of phenylpropiolyl chloride on ketonic compounds, T., 1383; P., 224.
tetrazoline. Part III., T., 1768; P., 258.
Runge, *Otto*. See *Fritz* **Reitzenstein**.
Rupe, *Hans*, and *Gunnar* **Frisell**, cinnamylidenecamphor and its reduction products, A., i, 220, 362.
Rupe, *Hans*, and *Paul* **Schlochoff**, cineolic acid. IV. Synthesis and constitution of cinenic acid, A., i, 409.
methylheptenone oxides, A., i, 414.
carvone, A., i, 449.
Rupe, *Hans*, and *Georg L. M.* **Schwarz**, chromophorous groups. II. Methine-ammonium dyes, A., i, 83.
Rupe, *Hans*, and *Felix* **Speiser**, cinnamylidenelævulic acid and its reduction products, A., i, 351.
Rupp, *Erwin*, formic acid and its volumetric estimation, A., ii, 291.
iodic acid as an oxidising reagent, A., ii, 417.
Rupp, *Erwin*, iodometric estimation of sulphurous acid, A., ii, 479.
titrimetric method of estimating mercury, A., ii, 484.
estimation of phosphorus in phosphorised oil, A., ii, 763.
evaluation of officinal mercuric cyanide, A., ii, 867.
titrimetric estimation and separation of cyanides, thiocyanates, and chlorides, A., ii, 867.
Rupp, *Erwin*, and *Philipp* **Nöll**, estimation of mercury in organic mercury compounds, A., ii, 285.
Rupp, *Erwin*, and *Emil* **Rössler**, volumetric estimation of ammonium salts with sodium hypobromite, A., ii, 418.
Rusche, *Franz*. See *Robert* **Behrend**.
Russ, *Franz*, action of the silent electric discharge on chlorine, A., ii, 381.
Russe, *Frederick William*. See *Charles Loring* **Jackson**.
Russell, *Alfred Ernest*. See *Leonard Stanley* **Dudgeon**.
Rutherford, *Ernest*, present problems of radioactivity, A., ii, 218.
properties of radium in minute quantities, A., ii, 367.
some properties of the α-rays from radium, A., ii, 495.
charge carried by the α- and β-rays of radium, A., ii, 621.
slow transformation products of radium, A., ii, 664.
Rutherford, *Ernest*, and *Bertram Borden* **Boltwood**, relative proportion of radium and uranium in radioactive minerals, A., ii, 568.
Ruths, *H.* See *Paul* **Wagner**.
Růžička, *Vladislav*, differences in staining reaction of living and dead protoplasm, A., ii, 405.
Ryffel, *John Henry*, estimation of β-hydroxybutyric acid in urine, A., ii, 559.
Rzentkowski, *Kasimir von*, composition of blood and exudations in disease, A., ii, 337.

S.

Sabat, *Bronislas*, action of radium bromide on the electrical resistance of metals, A., ii, 219.
Sabatier, *Paul*, and *Alphonse* **Mailhe**, the three methylcyclohexanones and the corresponding methylcyclohexanols, A., i, 275.
monochloro-derivatives of methylcyclohexane, A., i, 334.

Sabatier, *Paul*, and *Alphonse* **Mailhe**, synthesis of three tertiary dimethylcyclohexanols and the derived hydrocarbons, A., i, 587.
catalytic decomposition of alkyl haloids by means of anhydrous metallic chlorides, A., i, 677.
secondary reaction of magnesium alkyl haloids, A., i, 706.
Sabatier, *Paul*, and *Jean Baptiste* **Senderens**, reaction distinguishing between primary, secondary, and tertiary alcohols, A., i, 254.
application to nitriles of the method of direct hydrogenation by catalysis; synthesis of primary, secondary, and tertiary amines, A., i, 267.
new general methods of hydrogenation and of molecular reactions based on the use of finely-divided metals. I., A., i, 333.
general methods of hydrogenation and decomposition based on the use of finely-divided metals. Part II. Molecular decompositions and condensations, A., i, 401.
Sablon. See **Leclerc du Sablon**.
Sacharow, *G.*, and *Hans* **Sachs**, hæmolytic action of photodynamic substances, A., ii, 465.
Sachs, *Arthur*, jordanite from Upper Silesia, A., ii, 96.
Sachs, *Franz*, and *Guido* **Bargellini**, condensation of flavinduline with methylene compounds. II., A., i, 488.
Sachs, *Franz*, and *Mario* **Craveri**, condensations with 1:2-naphthaquinone-4-sulphonic acid, A., i, 909.
Sachs, *Franz*, and *Ludwig* **Sachs**, replacement of the aldehyde oxygen atom by two univalent hydrocarbon radicles by means of Grignard's reaction, A., i, 190.
p-dimethylaminobenzaldehyde. III. Action of magnesium organic compounds, A., i, 202.
reaction between tertiary amines and organo-magnesium compounds, A., i, 274.
Sachs, *Fritz*. See *Alfred* **Benrath**.
Sachs, *Hans*. See *G.* **Sacharow**.
Sachs, *Ludwig*. See *Franz* **Sachs**.
Sachsel, *Eugen*. See *Ferdinand Willy* **Hinrichsen**.
Sackur, *Otto*, the constant for the rate of decay of radium emanation, A., ii, 367.
radioactivity of thorium, A., ii, 368.
Sackur, *Otto*, [with *Paul* **Mauz** and *A.* **Siemens**], copper-zinc alloys, A., ii, 524.
Sackur, *Otto*. See also *Oskar* **Hahn**.
Sadtler, *Samuel S.*, inner crucible method for estimating sulphur and halogens in organic substances, A., ii, 760.
estimation of certain aldehydes and ketones in essential oils, A., ii, 867.
Sala, *B.* See *Giuseppe* **Bruni**.
Salant, *William*. See *S. J.* **Meltzer**.
Salkind, *Julius*, condensation of aldehydes with ketones in presence of potassium cyanide, A., i, 732.
Salmony, *Alfred*, and *Hugo* **Simonis**, derivatives of dibromo- and dichloromaleic acids and their conversion into indigo, A., i, 631.
Salvadori, *Roberto* [*Oreste Maria*], reaction of ammonia with commercial calcium carbide, A., i, 513.
lecture experiments, A., ii, 694.
Salvadori, *Roberto*. See also *Raffaelo* **Nasini**.
Salvo, *N.* See *Francesco Carlo* **Palazzo**.
Samec, *Maximilian*, condensation of formisobutaldol with dimethylaniline, A., i, 489.
Sammet, *George Victor*. See *Robert* **Luther**.
Sammis, *John Langley*, action of mercaptides on quinones, A., i, 797.
Samuely, *Franz*. See *Emil* **Abderhalden**.
Sand, *Henry Julius Salomon*, the measurement of the potential of the electrodes in stationary liquids; the determination of changes of concentration at the cathode during electrolysis, A., ii, 134.
rôle of diffusion during catalysis by colloidal metals and similar substances, A., ii, 233.
Sand, *Julius*, salts of the crystal-violet group, A., i, 948.
hypochlorous acid. III. Formation and decomposition of chloric acid, A., ii, 156.
Sand, *Julius*, and *O.* **Burger**, complex molybdenum thiocyanates, A., i, 923.
Sandberg, *Fani*. See *Herman* **Decker**.
Sandoz. See **Chemische Fabrik vorm. Sandoz**.
Sanna, *Andrea*, action of bromodinitrobenzene on glycine, A., i, 48.
new extractor, A., ii, 58.
Santi, *Luigi*, dissociation of ammonium chloride in its analytical relations, A., ii, 86.
Sapin, *A.*, arrow poison of the Lukarets, A., ii, 413.
Saposhnikoff, *Alexis V.*, crystallisation of tin and zinc by the electrolysis of their salts, A., ii, 395.
properties of mixtures of nitric and sulphuric acids. IV., A., ii, 583.

Sarasin, *Ed.*, *Thomas* **Tommasina**, and *F. Jules* **Micheli**, genesis of temporary radioactivity, A., ii, 3.

Sarow, *Willfried.* See *Arthur* **Rosenheim**.

Satta, *Giuseppe*, acetone-formation in the body. II., A., ii, 406.

the distribution of nitrogen in the urine, A., ii, 407.

Sattler, *Hubert*, absorption and excretion of iron in the alimentary canal of dogs and cats, A., ii, 333.

Saugon, *L.* See *Édouard* **Urbain**.

Saurel, *Paul*, indifferent points, A., ii, 683.

Sautermeister, *Constantin.* See *Carl* **Bülow**.

Sauton. See *J. Auguste* **Trillat**.

Sautter, *Richard.* See *August* **Klages**.

Savage, *William George*, bacteriological examination of tidal mud, A., ii, 341.

Savarè. *B.* See *Maurice* **Padoa**.

Sawamura, *Shin*, the large bacillus observed in flacherie, A., ii, 472.

Sawyer, *Harris Eastman*, potassium oxalate as a lead precipitant in sugar analysis, A., ii, 210.

Scarlat, *Georg*, preparation of diethylxanthine, A., i, 160.

Schachner, *Alois*, condensation of formisobutaldol with acetaldehyde, A., i, 171.

Schaefer, *Clemens*, infra-red absorption spectrum of carbon dioxide as affected by pressure, A., ii, 129.

Schäfer, *Edward Albert*, and *Herbert Johann* **Scharlieb**, action of chloroform on the heart and arteries, A., ii, 105.

Schäfer, *Hans*, electroaffinity of anions. I. The oxalate ion, A., ii, 499.

Schär, *Eduard*, influence of alkaline substances on spontaneous oxidation, A., i, 434.

a new form of test-tube, A., ii, 514.

Schaller, *Waldemar T.*, dumortierite, A., ii, 262.

mineralogical notes; [gyrolite, prehnite, anhydrite, bournonite, glaucodote], A., ii, 724.

Schaller, *Waldemar T.* See also *Louis Caryl* **Graton**.

Schander, *Richard*, formation of hydrogen sulphide by yeast, A., ii, 647.

Schaposchnikoff, *K.*, an empirical relationship between the densities of two liquids, A., ii, 373.

Schaposchnikoff, *Wladimir G.*, dihydrophenazine, A., i, 840.

Schaposchnikoff, *Wladimir G.*, and *F.* **Goleff**, 1:1′-dichloro-2:2′-dinaphthylamine, A., i, 644.

Schaposchnikoff, *Wladimir G.*, and *V.* **Svientoslavski**, the copper compound of *p*-nitroaniline-red, A., i, 161.

Schardinger, *Franz*, *Bacillus macerans*, a bacillus which produces acetone, A., ii, 646.

Scharizer, *Rudolf*, constitution and genesis of iron sulphates: synthesis of sodium ferric sulphates, A., ii, 823.

Scharlieb, *Herbert Johann.* See *Edward Albert* **Schäfer**.

Scharwin, *Wassili*, action of acetic anhydride and sodium acetate on phenanthraquinone, A., i, 448.

Schaub, *Ira Obed.* See *J. H.* **Pettit**.

Schaum, [*Ferdinand*] *Karl* [*Franz*], photographic activity of ozone, A., ii, 295.

Schenck, *Martin*, some substances of physiological importance, A., i, 28.

oxaluramide, A., i, 267.

guanidine picrolonate, A., i, 513.

nuclein bases produced during the autofermentation of pancreas, A., ii, 266.

autodigestion of some varieties of yeast, A., ii, 547.

Schenck, *Martin.* See also *Friedrich* **Kutscher**.

Schenck, [*Friedrich*] *Rudolf*, red phosphorus, A., ii, 244.

Schenck, *Rudolf*, and *W.* **Heller**, mutual relationships of the different modifications of carbon, A., ii, 519.

reactions in the reduction of iron, A., ii, 526.

Schenk, *Richard*, radioactive properties of air, soil, and water in and around Halle, A., ii, 432.

Schenke, *Vincent*, estimation of phosphoric acid by the citrate method; a source of error hitherto overlooked and a modification for avoiding it, A., ii, 479.

Schereschewski, *E.* See *Alexander* **Tschirch**.

Schering, *E.* See **Chemische Fabrik auf Aktien**.

Schestakoff, *Peter J.*, action of hypochlorites on carbamide: new synthesis of hydrazine, A., i, 332.

Schestakoff, *Peter J.* See also *Alexis A.* **Shukoff**.

Scheuble, *Rudolf*, and *Emmo* **Loebl**, formation of alcohols by reduction of acid amides. II., A., i, 2.

Scheuer, *Otto*, preparation of oxides of nitrogen by high tension discharges in air, A., ii, 702.

Scheuer, *Otto.* See also *Wilhelm* **Vaubel**.

Scheunert, *Arthur*, influence of movement of the body on the digestion and absorption of food-stuffs in the horse, A., ii, 733.
Schidlof, *A.* See *Charles Eugène* **Guye**.
Schidrowitz, *Philip*, and *Frederick* **Kaye**, some conditions affecting the ester value of brandy, A., ii, 486.
estimation of higher alcohols in spirits. I., A., ii, 486.
Schierenberg, *F.* See *Ferdinand* **Henrich**.
Schiff, *Hugo*, formation of protocatechuic anilide, A., i, 45.
crystalline chromic phosphate, A., ii, 255.
Schilling, *Johannes*, occurrence of tantalum and niobium, A., ii, 537.
Schilling, *Johannes*. See also *Paul* **Jannasch**.
Schimmel & Co., ethereal oils, A., i, 536.
Schindelmeiser, *Iwan* [*Robert*]. See *Iwan L.* **Kondakoff**.
Schittenhelm, *Alfred*, ferments which decompose nuclein compounds, A., i, 108.
formation and decomposition of uric acid in extracts of the organs of oxen, A., ii, 644.
non-occurrence in the spleen and liver of oxen of a ferment which transforms guanine into xanthine; reply to Jones, Partridge, and Winternitz, A., ii, 645.
the uricolytic ferment, A., ii, 645.
Schittenhelm, *Alfred*, and *Ernst* **Bendix**, behaviour of guanine in the rabbit, A., ii, 188.
action of various nucleic acids on the animal organism, A., ii, 744.
Schittenhelm, *Alfred*. See also *Emil* **Abderhalden** and *Martin* **Krüger**.
Schlagdenhauffen, [*Charles*] *Frédéric*, and *E.* **Reeb**, organic compounds of metals in plants, A., ii, 51.
Schlegel, *Hans*. See *Ernst* **Beckmann**.
Schlochoff, *Paul*. See *Hans* **Rupe**.
Schloesinger, *N. A.* See *Leo A.* **Tschugaeff**.
Schlötter, *Max*, transformation of potassium chlorate into iodate by iodine in presence of nitric acid, A., ii, 520.
Schlundt, *Herman*, and *Richard B.* **Moore**, radioactivity of some deep well and mineral waters, A., ii, 368.
Schlundt, *Herman*. See also *Louis* **Kahlenberg**.
Schmaedel, *Wolfgang von*. See *Richard* **Willstätter**.
Schmatolla, *Otto*, estimation of acids combined with aluminium, A., ii, 357.
Schmid, *Arthur*. See *Leopold* **Nathan**.
Schmid, *Hans*. See *Rudolf Friedrich* **Weinland**.
Schmid, *Julius*. See *Martin* **Krüger**.
Schmid, *Karl*. See *Rudolf Friedrich* **Weinland**.
Schmidlin, *Jules*, theory of dyes, A., i, 75.
heats of combustion of triphenylmethyl and some triphenylmethane derivatives, A., ii, 11.
action of low temperatures on colouring matters, A., ii, 12.
Schmidlin, *Julius*. See *Emil* **Fischer**.
Schmidt, *A.*, radioactivity of certain fresh-water springs of the Taunus, A., ii, 220.
Schmidt, *Ernst* [*Albert*], alkaloids of some Solanaceæ which induce mydriasis, A., i, 717.
relations between the chemical constitution and physiological action of some ammonium bases, A., ii, 105.
Schmidt, *Ernst*, [with *F.* **Flaecher**], synthesis of ephedrine, A., i, 370.
Schmidt, *Ernst*, [with *Hilderich* **Hartmann**, *G.* **Kleine**, *Franz M.* **Litterscheid**, and *Waldemar* **Wagner**], choline, neurine, and allied compounds, A., i, 23.
Schmidt, *Heinrich Willy*, measurement of the emanations contained in liquids, A., ii, 788.
Schmidt, *Julius*, and *Gustav* **Ladner**, studies in the phenanthrene series. XVI. 9:10-Dichloro- and 9:10-dibromo-phenanthrenes; a new mode of formation of *o*-dichlorobenzene, A., i, 43.
Schmidt, *Otto*, *o*-methylaminobenzaldehyde, A., i, 213.
a new method of formation of diazo-compounds and a general method for determining the constitution of azo-dyes, A., i, 951.
Schmidt, *Rudolf*. See *Siegfried* **Valentiner**.
Schmidt-Nielsen, *Sigval*, action of radium emanations on chymosin, A., ii, 48.
Schmierer, *Friedrich*. See *Conrad* **Willgerodt**.
Schmitt, *Ch.*, new method of preparation of esters of mesoxalic acid; condensation with esters of cyanoacetic acid, A., i, 508.
derivatives of mesoxalic esters, A., i, 585.
Schmitt, *E.*, nitrogenous impurities of glycerol and fats, A., ii, 769.
Schmitz, *Leonhard*. See *Georg* **Schroeter**.

Schmoelling, *Leo von*, copal oils, A., ii, 775.
Schmoll, *E.*, the composition of caseous deposits in tubercle, A., ii, 272.
Schnabel, *Richard*. See *Arthur* **Rosenheim**.
Schneider, *Gustav*. See *Roland* **Scholl**.
Schneider, *Ph.*, plant analysis as an aid in estimating the manurial requirements, with special reference to hops, A., ii, 755.
Schneider, *Ph.* See also *Ferdinand* **Wohltmann**.
Schneider, *W.*, the Sichler "sinacid butyrometry," A., ii, 560.
Schneider, *W.* See also *Theodor* **Pfeiffer**.
Schneidewind, *Wilhelm*, and *O.* **Ringleben**, action of crude and pure potassium salts with calcium in different forms, A., ii, 197.
Schoch, *Eugene P.*, study of reversible oxidation and reduction reactions in solutions, A., ii, 19.
Schöler, *Gustav*, a quick-acting potash apparatus, A., ii, 481.
Schöllhorn, *F.* See *Hermann* **Will**.
Schöndorff, *Bernhard*. See *Eduard* **Pflüger**.
Schönewald, *A.* See *Wilhelm* **Traube**.
Schönewald, *Hans*, and *K.* **Bartlett**, influence of various kinds of glass on the accuracy of Kjeldahl's nitrogen process, A., ii, 201.
Scholl, *Hermann*, photoelectric phenomena exhibited by moist silver iodide, A., ii, 297.
Scholl, *Roland*, and *Hans* **Berblinger**, bromination of 1:5-diaminoanthraquinone, A., i, 88.
Scholl, *Roland*, and *Philipp* **Kačer**, 2:3-diaminoanthraquinone and azines of the anthraquinone series, A., i, 88.
Scholl, *Roland*, and *Albert* **Krieger**, constitution of dibromo-1:6-diaminoanthraquinone, A., i, 145.
action of aromatic bases on the nitroamino-groups of 2:7-dibromo-4:9-dinitro-1:6-dinitroaminoanthraquinone, A., i, 145.
Scholl, *Roland*, [and, in part, *Gustav* **Schneider** and *Fritz* **Eberle**], nitroamines of the anthraquinone series, A., i, 70.
Scholl, *Roland*, [with *Albert Otto* **Weil** and *Karl* **Holdermann**], nitrimines and nitriminic acids, A., i, 181.
Scholl, *Roland*. See also *Philipp* **Kačer**.
Scholtz, *Max*, isomeric coninium iodides. II., A., i, 296.
standardisation of normal solutions, A., ii, 57.
titrimetric estimation of chlorates and bromates, A., ii, 651.
Scholtz, *Max*, and *Konrad* **Bode**, quaternary ammonium compounds of the alkaloids, A., i, 79.
Scholtz, *Max*, and *P.* **Pawlicki**, stereoisomeric conhydrinium iodides, A., i, 473.
Scholze, *A.*, 2-methyl-6-pyrophthalone, A., i, 825.
Schoorl, *Nicolaas*, oxidation and reduction, A., ii, 692.
Schorigin, *P.* See *Max* **Trautz**.
Schreiber, *Berthold*. See *Stanislaus von* **Kostanecki**.
Schreinemakers, *Frans Antoon Hubert*, mixed crystals in systems of three substances, A., ii, 154, 376, 685.
ternary equilibria, A., ii, 804.
potassium chromates, A., ii, 818.
ammonium chromates, A., ii, 820.
Schreiner, *Oswald*, colorimetric methods; a simple colorimeter for general use, A., ii, 760.
Schreiner, *Oswald*, and *Bailey Edgar* **Brown**, colorimetric estimation of phosphates, A., ii, 117.
Schrimpff, *August*, improved hydrogen sulphide apparatus, A., ii, 383.
Schröder, *Fritz*. See *Emil* **Knoevenagel**.
Schröder, *Heinrich*. See *Julius Wilhelm* **Brühl**.
Schroeder, *Johannes*, pyridine as a solvent and ionising medium for inorganic metallic salts, A., ii, 306.
Schroeder, *Johannes*. See also *Alexander* **Naumann**.
Schroeter, *Georg*, and *Gustav* **Herzberg**, methionic [methanedisulphonic] acid, A., i, 851.
Schroeter, *Georg*, [with *Leonhard* **Schmitz** and *Rudolf* **Schwamborn**], symmetrical dialkyl esters of citric acid, A., i, 738.
Schroeter, *Georg*, [with *Rudolf* **Schwamborn** and *Carl* **Stassen**], β-aminotricarballylic acid, A., i, 819.
Schrötter, *Hermann von*. See *Adolf* **Loewy**.
Schrumpf, *P.*, preparation of pepsin, A., i, 556.
Schryver, *Samuel Barnett*, autolysis. II. The influence of the thyroid, A., ii, 267.
Schtschegolew, *Michael*. See *Carl Adam* **Bischoff**.
Schtscherbakoff, *M. A.*, relation of lead iodide to water and oxygen, A., ii, 711.
Schubetski, *Ludwig*. See *Carl Adam* **Bischoff**.
Schuch, *Julius*, estimation of fluorine, A., ii, 552.
Schucht, *Ludwig*, free acid in superphosphate, A., ii, 610.

Schürhoff, *P.*, cause of the oxidising action of urine, A., ii, 740.
Schulten, *August Benjamin* (*Baron*) *de*, composition of fiedlerite, A., ii, 173.
artificial production of hopeite, A., ii, 174.
artificial production of barium- and strontium-haidingerites, A., ii, 174.
artificial production of barium-, lead-, and strontium-monetites, and of arsenated monetites, A., ii, 174.
artificial production of hureaulite and cadmium-hureaulite, A., ii, 175.
artificial production by a wet method of anhydrous chromates of barium, lead, and strontium, A., ii, 175.
Schultze, *Ernst Heinrich*, rapid estimation of calcium, potassium, and phosphoric acid, A., ii, 482.
Schultze, *Fr.*, comparative estimations of glycerol, A., ii, 769.
Schultze, *Fritz*. See **Lassar-Cohn**.
Schulz, *Arthur*, spectroscopic characters of hæmatoporphyrin, A., i, 252.
Schulz, *Paul*. See *Alexander* **Naumann**.
Schulze, *Bernhard*, development of rye and wheat, A., ii, 754.
Schulze, *Carl*, effect of soil sterilisation on plant development, A., ii, 54.
Schulze, *Ernst* [*August*], non-proteid nitrogenous constituents of agricultural plants, A., ii, 52.
Schulze, *Ernst*, and *Ernst* **Winterstein**, action of light on cholesterol, A., i, 128.
mono-amino-acids obtained from seedlings of *Vicia sativa* and *Lupinus albus*, A., i, 686.
specific rotatory powers of tyrosine preparations of vegetable origin, A., i, 699.
occurrence of ricinine in young Ricinus plants, A., ii, 112.
Schulze, *Heinrich*, aconitine. II., A., i, 656.
Schulze, *Rudolf*. See *Ludwig* **Claisen**.
Schumacher, *Hans*, apparatus for the estimation of carbon in iron by Eggertz's method, A., ii, 203.
Schumacher, *Th.*, and *E.* **Feder**, some uses of iodic acid in volumetric analysis, A., ii, 856.
Schumm, *Otto*, estimation of mercury in organs, A., ii, 286.
autolysis, A., ii, 840.
Schupp. *Gustav*. See *Alfred* **Einhorn** and *Franz* **Henle**.
Schwab, *G.* See *Georg* **Rohde**.
Schwahn, *Heinrich F. D.*, preparation of metallic aluminium, A., ii, 712.
Schwalbe, *Carl*, preparation of benzene free from sulphur, A., i, 124.
velocity of decomposition of *p*-nitrobenzenediazonium chloride, A., i, 618, 843.
Dimroth's thiophen dimercuric hydroxyacetate, A., i, 656.
stability of diazotised *p*-nitroaniline, A., i, 952.
colorimetric estimation of thiophen, A., ii, 779.
Schwamborn, *Rudolf*. See *Georg* **Schroeter**.
Schwarz, *F.*, influence of the duration of boiling on the saponification value of beeswax, A., ii, 361, 657.
Schwarz, *Georg L. M.* See *Hans* **Rupe**.
Schwarz, *Osw.*, antipepsin, A., ii, 731.
Schwenk, *Wilhelm*. See *Joh.* **Howitz**.
Schwezoff, *Boris*, benzene as indicator for iodimetry, A., ii, 280.
Scott, *Alexander*, note on the atomic weight of nitrogen, P., 309.
Scudder, *Heyward*, detection of methyl alcohol [in ethyl alcohol], A., ii, 615.
Scurti, *Francesco*. See *Gaspare* **Ampola**.
Sebelien, *John*, manurial value of human excrement, A., ii, 114.
standardising of normal acids, A., ii, 551.
Seelhorst, *Conrad von*, manuring as based on ten years' experiments, A., ii, 195.
Seelhorst, *Conrad von*, and **Fresenius**, influence of soil moisture on the amounts of total and proteid nitrogen in oat straw, A., ii, 194.
Seelhorst, *Conrad von*, and **Müther**, water in the soil and the consumption of water by plants, A., ii, 606.
Seelig, *Albert*, ether-glycosuria, and the effect of intravenous oxygen infusion on it, A., ii, 469.
Seemann, *Ferdinand*, estimation and separation of silica and fluorine, A., ii, 555.
Seemann, *John*, oxidation of gelatin and of egg-albumin with calcium permanganate, A., i, 619.
Segalle, *R.*, [with **Langer**], preparation of ammonium dichromate, A., ii, 707.
Segelitz, *L.* See *Oscar* **Doebner**.
Segin, *Adalbert*, action of bacteria on sugars, A., ii, 341.
Seib, *Otto*, estimation of the citrate-soluble phosphoric acid in superphosphates, A., ii, 554.
Seidell, *Atherton*. See *Frank Kenneth* **Cameron**.
Seifert, *M.* See *Stefan von* **Niementowski**.
Seil, *Harvey Ambrose*. See *Marston Taylor* **Bogert**.

Seiler, *E.* See *Karl A.* **Hofmann.**
Seiler, *Fr.* See *Josef* **König.**
Seligmann, *E.*, action of camphor on the circulation, A., ii, 409.
Sell, *William James*, the chlorination of methyl derivatives of pyridine. Part I. 2-Methylpyridine, T., 799; P., 165; discussion, P., 166.
Sellards, *A. W.* See *Edward* **Bartow.**
Sellier, *Eugène*, estimation of ammonia in vegetable products, beets, etc., A., ii, 60.
Sellier, *G.*, detection of boric acid in foods, A., ii, 554.
Semichon, *L.*, physiological significance of the urate cells in melliferous insects, A., ii, 600.
Semmler, *Friedrich Wilhelm*, oximes of pulegone, A., i, 222.
Senderens, *Jean Baptiste.* See *Paul* **Sabatier.**
Senier, *Alfred*, *Percy Corlett* **Austin**, and *(Miss) Rosalind* **Clarke**, the interaction of acridines with magnesium alkyl halides, T., 1469; P., 227.
Senn, *Hans*, electrolytic refining of lead in hydrofluosilicic acid solutions, A., ii, 389.
Senter, *George*, studies on enzyme action: effect of "poisons" on the rate of decomposition of hydrogen peroxide by hæmase, A., i, 107.
reaction-velocities in heterogeneous systems: with particular reference to enzyme actions, A., ii, 377.
rôle of diffusion in the catalysis of hydrogen peroxide by colloidal platinum, A., ii, 379.
Seyewetz, *Alphonse*, and *Jean* **Bardin**, action of sodium sulphite on acetaldehyde, A., i, 683.
titration of acetaldehyde, A., ii, 771.
Seyewetz, *Alphonse.* See also *Auguste* **Lumière.**
Seymour, *William.* See *Frederick Levy* **Dunlap.**
Shaffer, *Philip*, catalase, A., i, 956.
Shaffer, *Philip.* See also *S. P.* **Beebe.**
Shaffer, *Philip A.* See *Charles Loring* **Jackson.**
Shattock, *Samuel G.*, a prehistoric Egyptian calculus, A., ii, 843.
Shepherd, *Earnest Stanley*, aluminium-zinc alloys, A., ii, 588.
Shepherd, *Earnest Stanley*, and *George Burr* **Upton**, tensile strength of copper-tin alloys, A., ii, 587.
Sheppard, *Samuel Edward*, the reversibility of photographic development and the retarding action of soluble bromides, T., 1311; P., 223.
Sheppard, *Samuel Edward*, and *Charles Edward Kenneth* **Mees**, the molecular condition in solution of ferrous oxalate, T., 189; P., 10.
theory of photographic processes; chemical dynamics of development, A., ii, 294.
theory of photographic processes. II. Chemical dynamics of development, including the microscopy of the image, A., ii, 784.
Sherman, *Henry Clapp*, and *Milton J.* **Falk**, estimation of nitrogen in organic compounds, A., ii, 116.
influence of atmospheric oxidation on the constants of oils. II., A., ii, 491.
Sherman, *Henry Clapp*, *Albert W.* **Hahn**, and *Arthur J.* **Mettler**, comparative experiments on chemical preservatives in milk, A., ii, 758.
Sherman, *Henry Clapp.* See also *W. N.* **Berg.**
Sherrill, *Miles S.*, and *Stanislaws* **Skowronski**, mercury thiocyanate complexes, A., i, 265.
Shibata, *Keisaku*, chemotaxis of Isoetes spermatozoids, A., ii, 190.
Shimer, *Porter W.*, a new filter, A., ii, 349.
Shimizu, *Sumu.* See *Kōtarō* **Honda.**
Short, *Frederick Charles.* See *Alexander* **Findlay.**
Shukoff, *Alexis A.*, and *Peter J.* **Schestakoff**, direct estimation of glycerol, A., ii, 289.
Shukoff, *Iwan*, organo-metallic compounds, A., i, 759.
Shutt, *Frank Thomas*, effect of rust on the straw and grain of wheat, A., ii, 476.
Sichler & Richter. See **Molkereitechn. Inst. Sichler & Richter, Leipzig.**
Sidgwick, *Nevil Vincent*, note on the interaction of metallic cyanides and organic halides, P., 120.
Sieber, *(Madame) Nadine*, glycolytic principle in blood-fibrin, A., ii, 541.
Siebert, *Carl.* See *Wilhelm* **Biltz** and *Daniel* **Vorländer.**
Siebert, *Erwin.* See *Carl* **Bülow.**
Siebert, *Werner.* See *Alfred* **Stock.**
Siegfried, *Max* [*August*], derivatives of amino-acids, A., i, 59.
caseinokyrine, A., i, 104.
glutokyrine, A., i, 105.
lysine, A., i, 297.
peptones, A., i, 727.
union of carbon dioxide with amphoteric amino-substances, A., ii, 332.
Siemens, *A.* See *Otto* **Sackur.**

Siemens & Halske Akt.-Ges., purification of tantalum, A., ii, 96.
Sieplein, *Otto J.* See *Charles Frederic* **Mabery.**
Sigmund, *Wilhelm*, physiological action of ozone, A., ii, 472, 476.
Sikes, *Alfred Walter*, the globulin of albuminous urine, A., ii, 843.
Silber, *Paul G.* See *Giacomo Luigi* **Ciamician.**
Silbergleit, *Hermann*, and *Max* **Mosse**, the power of human blood to decompose hydrogen peroxide, A., ii, 178.
Silbermann, *Martin.* See *Carl* **Neuberg.**
Silberrad, *Oswald*, the constitution of nitrogen iodide, T., 55.
the metallic derivatives of nitrogen iodide and their bearing on its constitution, T., 66.
Sill, *Herbert Fowler*, equilibrium between a nitrogen base and organic acids in various solvents, A., ii, 377.
Silvatici, *S.* See *Nazareno* **Tarugi.**
Simon, *Charles Edmund*, feeding on mono-amino-acids in cystinuria, A., ii, 741.
Simon, *Heinrich.* See *August* **Michaelis.**
Simon, *Louis Jacques*, action of potassium permanganate on the salts of hydroxylamine (nitrate, phosphate, arsenate), A., ii, 242.
volumetric method of estimating hydroxylamine, A., ii, 352.
Simon, *M.*, selenocyanopropionic acid, A., i, 866.
Simon, *M.* See also *Richard* **Stoermer.**
Simonet, *Adolphe.* See *Léo* **Vignon.**
Simonis, *Hugo.* See *Alfred* **Salmony.**
Simons, *Frank Darius.* See *Charles Albert* **Crampton.**
Simonsen, *John Lionel.* See *William Henry* **Perkin**, *jun.*
Simpson, *Edward Sydney*, [chrysocolla from Western Australia], A., ii, 176.
Simpson, *George C.*, atmospheric electricity [radioactivity] in high latitudes, A., ii, 662.
Sinnatt, *Frank Sturdy*, the estimation of picric acid additive compounds, P., 297.
Sirk, *H.*, acceleration of the evolution of chlorine from potassium chlorate and hydrochloric acid by the presence of platinum, A., ii, 381.
Sisley, *Paul.* See *Philippe* **Barbier.**
Sisson, *Henry Arnott.* See *Leonard Angelo* **Levy.**
Sjollema, *Bouwe*, reduction of perchlorate by the wet method, A., ii, 21.
employment of dyes in soil investigation, A., ii, 195.
isolation of the colloid substances of soils, A., ii, 195.
Skinner, *Clarence A.*, Faraday's law in reference to the glow discharge in gases, A., ii, 797.
Skita, *Aladar.* See *Georg* **Merling.**
Skossarewsky, *M.*, action of potassium hydroxide on a mixture of phenylacetylene and acetone; synthesis of phenylacetylenyldimethylcarbinol, A., i, 774.
Skowronski, *Stanislaws.* See *Miles S.* **Sherrill.**
Skrabal, *Anton*, kinetics of the reaction between potassium permanganate and oxalic acid, A., ii, 17.
"primary oxide" theory of oxidation, A., ii, 18.
action of oxidising agents on hydriodic acid; reactions of hypoiodous acid, A., ii, 449.
kinetics of processes of oxidation, A., ii, 804.
Skraup, *Zdenko Hanns*, hydrolysis of proteids. II. Gelatin, A., i, 398.
diamino-acids in casein and gelatin; a correction, A., i, 619.
Slade, *Henry B.*, preparation of nucleic acid, A., i, 620.
Slater, (*Miss*) *J. M. W.*, excited activity of thorium, A., ii, 368.
Slator, *Arthur*, the chemical dynamics of the reactions between sodium thiosulphate and organic halogen compounds. Part II. Halogen-substituted acetates, T., 481; P., 121.
studies in fermentation. I. The chemical dynamics of alcoholic fermentation by yeast, P., 304.
Slatowratsky, *N.*, and *Gustav* **Tammann**, do crystals soften in the neighbourhood of their melting point? A., ii, 807.
Slijper, *H. J.* See *Arnold Frederik* **Holleman.**
Slowtzoff, *B.*, inanition studies. III. In libella. IV. In bees, A., ii, 45.
Sluiter, *C. H.*, decomposition of the sodium derivative of isonitrosoacetophenone, A., i, 791.
Wislicenus's supposed isomeride of dibenzoylmethane, A., i, 796.
mechanism of the Beckmann intramolecular transformation, A., ii, 692.
Slyke, *Lucius L. van*, and *Edwin Bret* **Hart**, casein and paracasein in some of their relations to bases and acids, A., i, 498.
Smallman, *Arthur Briton.* See *William Boog* **Leishman.**
Smedley, (*Miss*) *Ida*, studies on the origin of colour; derivatives of fluorene T. 1249; P., 221.

Smiles, *Samuel*, an asymmetric synthesis of quadrivalent sulphur, T., 450; P., 92.
the action of α-halogen ketones on alkyl sulphides, P., 93.
Smirnoff, *F. W.*, addition of hypochlorous acid to allene hydrocarbons. II., A., i, 172.
Smith, *Alexander*, two liquid states of sulphur, Sλ and Sμ, and their transition point, A., ii, 382.
nature of amorphous sulphur, and influence of foreign substances on the phenomena of supercooling observed when melted sulphur is suddenly chilled, A., ii, 382.
Smith, *Alexander*, *Willis Boit* **Holmes**, and *Elliot S.* **Hall**, amorphous sulphur. II. Two liquid states of aggregation of sulphur, Sλ and Sμ, and their transition point, A., ii, 580.
Smith, (*Miss*) *Alice Emily*. See *Kennedy Joseph Previté* **Orton**.
Smith, *Bernard H.* See *John Kerfood* **Haywood**.
Smith, *Edgar Fahs*, [with *Roy D.* **Hall**, (*Miss*) *Mary Engle* **Pennington**, and *Clarence W.* **Balke**], columbium and tantalum, A., ii, 828.
Smith, *Edgar Fahs*, [with *George H.* **West** and (*Miss*) *Lily Gavit* **Kollock**], use of the rotating anode in electroanalysis, A., ii, 198.
Smith, *Edgar Fahs*. See also *Roy D.* **Hall**, (*Miss*) *Lily Gavit* **Kollock**, and *Allen* **Rogers**.
Smith, *George McPhail*, action of barium amalgam on solutions of sodium and potassium salts, A., ii, 164.
reciprocal replacement of metals in aqueous solutions, A., ii, 450.
Smith, *Harry Monmouth*, and *W. H.* **McClelland**, molecular depression constant of *p*-azoxyanisole, A., ii, 11.
Smith, *Henry Llewellyn*. See *William Arthur* **Bone**.
Smith, *Herbert Procter*, a modified form of the persulphate method of estimating manganese in iron and steel, A., ii, 66.
Smith, *Letchworth*, and *Charles George Lewis* **Wolf**, physiological action of azoimide, A., ii, 106.
Smith, *Norman*, the slow combustion of carbon disulphide, P., 311.
Smith, *Ralph Ogden*, rapid electrolytic estimation of lead, A., ii, 860.
electrolytic estimation of mercury [in cinnabar] with the use of a rotating anode, A., ii, 860.
Smith, *Sydney Herbert*. See *James Charles* **Philip**.
Smits, *Andreas*, phenomena observed when the plait curve meets the solubility curve, A., ii, 234, 684.
hidden equilibria in the *p*-*x*-diagram of a binary system in consequence of the appearance of solid substances, A., ii, 683.
contribution to the knowledge of the *px*- and *pT*-lines for the case that two substances enter into a combination which is dissociated in the liquid and the gas phase, A., ii, 683.
Snell, *John Ferguson*. See *Stanley R.* **Benedict**.
Snowden, *Ralph Cuthbert*, electrolytic deposition of silver, A., ii, 452.
electrolytic precipitation of nickel on nickel, A., ii, 459.
Soden, [*Eberhardt Hildebrand Wilhelm Ludwig*] *Hugo von*, and *Fritz* **Elze**, ethereal oil of birch buds, A., i, 451.
new terpene alcohol in myrtle oil, A., i, 800.
Sörensen, *Sören Peter Lauritz*, synthesis of α-amino-acids by means of ethyl phthaliminomalonate, A., i, 600.
synthesis of amino-acids. V. α-Amino-δ-hydroxyvaleric acid, A., i, 749.
the question of uniform standardising substances for volumetric solutions, A., ii, 414.
Sörensen, *Sören Peter Lauritz*, and *A. C.* **Andersen**, use of sodium carbonate and sodium oxalate as the standard substances in acidimetry, A., ii, 415.
nitrogen estimations in lysine and analogous substances by Kjeldahl's method, A., ii, 553.
Soldaini, *Arturo*, products formed under various conditions by the action of halogens on *d*-lupanine, A., i, 371.
Soldi, *Angelo*. See *Guido* **Pellizzari**.
Sollmann, *Torald*, effect of blood on the kidney, A., ii, 180.
effects of isotonic solutions on the kidney, A., ii, 181.
perfusion experiments on excised kidneys, A., ii, 337.
Sollmann, *Torald*, and *J. A.* **Hofmann**, excretion of water in typhoid fever, A., ii, 272.
Solonina, *Andrei A.*, action of ethyl sodioacetoacetate on dibromohydrocarbons, A., i, 112.
Solonina, *Boris*. See *Herman* **Decker**.
Soloweitschik, *Boris*. See *Carl Adam* **Bischoff**.
Soltsien, *Paul*, detection of rancidity in butter, A., ii, 774.

Sommer, *Rudolf*, preparation of aromatic dihydroxyaldehydes, A., i, 141.
Souheur, *Lorenz*, preparation of vitreous arsenious oxide, A., ii, 633.
Southerden, *Frank*, a cheap Kipp's apparatus, A., ii, 20.
Spallino, *Rosario*. See *Alberto* **Peratoner**.
Speiser, *Felix*. See *Hans* **Rupe**.
Spencer, *E. D.* See *H.* **Morris-Airey**.
Spencer, *James Frederick*, electromotive behaviour of dilute amalgams, A., ii, 795.
Spencer, *James Frederick*, and *Richard* **Abegg**, electroaffinity differences between valency stages and their oxidation equilibria. II. Mutual relationships of the valency stages of thallium and the oxidation power of oxygen, A., ii, 369.
Spencer, *James Frederick*. See also *Richard* **Abegg**.
Spengler, *Oskar*. See *Richard Emil* **Meyer**.
Speransky, *Alexandr W.*, vapour tension of solid solutions. II., A., ii, 230.
Speyer, *Edmund*. See *Martin* **Freund**.
Spieckermann, *Alb.* See *Josef* **König**.
Spiegel, *Leopold* [*Julius*], yohimbine. II. Methylation of yohimboaic acid, A., i, 816.
formation of complex proteids from peptones, A., i, 954.
Spielmann, *Percy E.*, analysis of graphitic silicon and siloxicon, A., ii, 610.
Spiess, *Camille*, presence of bile pigments in leeches, A., ii, 737.
Spindler, *O. von*, detection of boric acid [in foods], A., ii, 480.
Spitzer, *Fritz*, electromotive behaviour of copper and zinc in their solutions in alkali cyanides, A., ii, 501, 611.
Spitzer, *Fritz*. See also *Erich* **Müller**.
Sponagel, *Paul*. See *Fritz* **Ullmann**.
Spring, *Walthère* [*Victor*], limits of visibility of fluorescence and the higher limit of the absolute weight of atoms, A., ii, 494.
limits of visibility of fluorescence and the maximum value of the absolute weight of the atom of hydrogen, A., ii, 565.
cause of the green tint of natural waters, A., ii, 695.
Sprinkmeyer, *H.*, and *H.* **Wagner**, sesamé oil, A., ii, 775.
Staal, *J. Ph.*, the chromogen of so-called scatole-red in normal human urine, A., ii, 843.
Stadler, *Wilhelm*. See *Arthur* **Rosenheim**.
Stadlin, *Werner*. See *Emil* **Erlenmeyer**, *jun.*
Stadlinger, *Hermann*. See *Paul* **Lehmann**.
Stähler, *Arthur*, titanium. I. Hydrates of titanium trihaloids, A., ii, 40.
red derivatives of hydrated vanadium trichloride, A., ii, 41.
volumetric estimation of hydroxylamine by means of tervalent titanium, A., ii, 116.
Stähler, *Arthur*, and *Bruno* **Denk**, zirconium halogen compounds, A., ii, 597.
Stähler, *Arthur*, and, in part, *Heinz* **Wirthwein**, titanium. II., A., ii, 595.
Staehling, *Ch.* See *Alfred* **Guyot**.
Stahl, *Hermann*. See *Otto* **Dimroth**.
Staněk, *Vladimir*, estimation of betaine in the products of sugar factories, A., ii, 562.
an improved method for estimating nitrogen in amino-acids, A., ii, 856.
Staněk, *Vladimir*. See also *Karl* **Andrlík** and *Alois* **Velich**.
Stanford, *R. V.*, new form of pyknometer, A., ii, 631.
Stapler, *Adolf*. See *Felix Benjamin* **Ahrens**.
Stappers, *Léon*, chloro-derivatives of propyl- and isopropyl-formals, A., i, 261.
Starling, *Ernest Henry*, chemical correlation of the functions of the body, A., ii, 735.
Starling, *Ernest Henry*. See also *William Maddock* **Bayliss**.
Stassen, *C.* See *Georg* **Schroeter**.
Statiropoulos, *Johannes G.* See *Henry Lord* **Wheeler**.
Staudinger, *Hermann*, ketens, A., i, 444.
action of ethyl sodiomalonate on ethyl ethoxysuccinate and ethyl ethoxybenzylmalonate, A., i, 736.
Stavenhagen, [*Friedrich Rudolph Otto*] *Alfred*, oxidation of atmospheric nitrogen in the high tension arc, A., ii, 517.
Stavrolopoulos, *Andreas*. See *Herman* **Decker**.
Steel, *Frederick William*. See *W. B.* **Hirt**.
Steele, *Bertram Dillon*, halogen hydrides as conducting solvents. III. Transport numbers, A., ii, 222.
Steele, *Bertram Dillon*, *Douglas* **McIntosh**, and *Ebenezer Henry* **Archibald**, halogen hydrides as conducting solvents. IV., A., ii, 222.
Stefanini, *Annibale*. See *Angelo* **Batelli**.

Stefanowska, (*Mlle.*) *M.*, increase in the weights of the organic and mineral substances of oats as a function of the age, A., ii, 194.

Steffens, *Max.* See *Georg W. A.* **Kahlbaum.**

Steiger, *George*, action of silver nitrate and thallous nitrate on certain natural silicates, A., ii, 707.

Steiger, *George.* See also *Frank Wigglesworth* **Clarke.**

Stein. See *Fritz* **Ullmann.**

Stein, *Israel.* See *Carl Adam* **Bischoff.**

Stein, *Richard.* See *Walter* **Dieckmann.**

Steindorff, *Adolf.* See *Julius von* **Braun.**

Steiner, *S. H.* See *Marston Taylor* **Bogert.**

Steinhausen, *Jacob*, enhanced lines, A., ii, 782.

Steinitz, *Franz*, and *Richard* **Weigert**, influence of carbohydrate diet on the composition of the child, A., ii, 180.

Steinkopf, *Wilhelm*, attempts to synthesise nitroacetonitrile, A., i, 122.

preparation of mono- and di-bromoacetonitriles, A., i, 756.

Steinkopf, *Wilhelm*, and *Wilhelm* **Frommel**, preparation of methyl bromide, A., i, 501.

Steinlen, *Rudolf L.*, crucible refrigerator, A., ii, 349.

Steinmann, *Albert.* See *Edwin* **Ackermann.**

Steinmetz, *Hermann*, transformation of polymorphic substances, A., ii, 685.

Steinwehr, *Helmuth von.* See *Wilhelm* **Jaeger.**

Stellbaum, *Carl.* See *Heinrich* **Biltz.**

Stenger, *Erich.* See *Julius* **Precht.**

Stepanoff, *A.*, removal of halogens from the benzene nucleus by the action of sodium and ethyl alcohol, A., i, 335.

Stepanoff, *N. J.* See *Nicolai S.* **Kurnakoff.**

Stephens, *Frank George Coad.* See *Raphael* **Meldola.**

Stern, *Ernst*, chemical kinetics of the benzoin synthesis (catalysis by cyanide ions), A., ii, 150.

Stern, *Hermann.* See *Julius* **Tafel.**

Stern, (*Mlle.*) *L.* See *Fr.* **Battelli.**

Sternberg, *Wilhelm*, sense of taste in pharmacy and pharmacology, A., ii, 409.

Steudel, *Hermann*, thymonucleic acids. II., A., i, 398.

salts of the hexone bases with picrolonic acid, A., i, 461.

Stevens, *Alviso Burdett*, nitrogen in gums, A., i 574.

Stevenson, *John*, chemical and geological history of the atmosphere, A., ii, 239.

Stewart, *Alfred Walter*, the addition of sodium hydrogen sulphite to ketonic compounds, T., 185; P., 13, 78.

the velocity of oxime formation in certain ketones, T., 410; P., 84.

the transmutation of geometrical isomerides, P., 73; discussion, P., 74.

Stewart, *George Neil*, hæmolysinogenic and agglutininogenic action of laked corpuscles, A., ii, 47.

Stieglitz, *Julius* [*Oscar*], and *Edith E.* **Barnard**, chloronium salts, A., i, 699.

Stieglitz, *Julius*, and *R. W.* **Noble**, isocarbamides, A., i, 639.

Stiepel, *C.*, estimation of glycerol in its solutions by means of the specific gravity, A., ii, 121.

Stiepel, *Carl*, preparation of betaine salts from molasses, A., i, 416.

Stiles, *Percy Goldthwait*, and *William Herbert* **Beers**, the masking of ionic effects by organic substances, A., ii, 736.

Stiles, *Percy Goldthwait.* See also *Carl Spencer* **Milliken.**

Stillich, *Otto*, *rôle* of sulphuric acid when acetylating with acetic anhydride, A., i, 318.

Stobbe, *Hans*, [with *Ferdinand* **Gademann**, *Alfred* **Lenzner**, and *Robert* **Rose**], butadiene compounds. VII. The colour of the fulgenic acids and fulgides, A., i, 857.

Stobbe, *Hans*, and *Karl* **Leuner**, butadiene compounds. VIII. Colourless alkylfulgides, A., i, 857.

Stock, *Alfred* [*Eduard*], decomposition of antimony hydride, A., ii, 96.

two modifications of the Töpler mercury air pump, A., ii, 514.

Stock, *Alfred*, and *Werner* **Siebert**, preparation of yellow arsenic, A., ii, 25.

preparation of yellow arsenic by means of the electric arc, A., ii, 315.

Stock, *Alfred*, and *Kurt* **Thiel**, phosphorus pentasulphide, A., ii, 703.

Stockem, *Lorenz.* See *Heinrich* **Danneel.**

Stoermer, *Richard* [*Heinrich Friedrich*], and *Theodor* **Biesenbach**, elimination of carbon dioxide and carbon monoxide from α-phenoxycinnamic acids, A., i, 524.

Stoermer, *Richard*, and *Otto* **Kippe**, condensation of benzaldehyde and ethyl phenoxyacetate. Claisen's cinnamic acid synthesis by means of sodium, A., i, 526, 777.

Stoermer, *Richard*, and *M.* **Simon**, geometrical isomerism of derivatives of diphenylethylene, A., i, 53.

Stohmann, *A.* See *Hans Theodor* **Bucherer**.
Stokes, *Henry Newlin.* See *William Francis* **Hillebrand**.
Stokes, *Joseph Arthur.* See *William Augustus* **Tilden**.
Stoklasa, *Julius*, carbohydrate combustion in the animal organism, A., ii, 179.
lactolase, an enzyme causing the formation of lactic acid in plant cells, A., ii, 192.
transformations of sodium nitrate in the soil of sugar-beet fields, A., ii, 854.
Stoklasa, *Julius*, and *Adolf* **Ernest**, origin, amount, and importance of carbon dioxide in soils, A., ii, 607.
Stoklasa, *Julius*, and *Eugen* **Vítek**, influence of different carbohydrates and organic acids on the decomposition of nitrates by bacteria, A., ii, 342, 472.
Stolle, *Fr.* See *Francis* **Marre**.
Stollé, *Robert*, formation of heterocyclic compounds from hydrazine derivatives. XVIII. Action of ammonia on tetrabromobenzylideneazine, A., i, 249.
condensation of ethyl acetoacetate with phenylmethylpyrazolone and the products formed by the action of hydrazine and of phenylhydrazine on dehydracetic acid, A., i, 838.
Stollé, *Robert*, and *Kurt* **Hofmann**, hydrazinecarboxylic acid, A., i, 28.
diaminoguanidine, A., i, 28.
Stollé, *Robert*, and *Walter* **Kind**, formation of heterocyclic compounds from hydrazine derivatives. XVI. Diazoles and bisdiazoles, A., i, 96.
Stollé, *Robert*, and *Eduard* **Münch**, formation of heterocyclic compounds from hydrazine derivatives. XV. The metallic derivatives of the condensation products of acylhydrazines with aldehydes and ketones and their behaviour towards acid chlorides and iodine, A., i, 94.
Stollé, *Robert*, *Eduard* **Münch**, and *Walter* **Kind**, formation of heterocyclic compounds from hydrazine derivatives. XVII. Diphenylosotetrazine and diphenylosotriazole, A., i, 97.
Stolz, *Friedrich*, 1-phenyl-4-methylpyrazolone, A., i, 942.
Stolz, *Friedrich*, [with *Hans* **Meyer**], adrenaline and alkylaminoacetylcatechol, A., i, 106.
Stoop, *Franz.* See *Emil* **Erlenmeyer**, *jun.*
Stoppani, *E.* See *Arnaldo* **Piutti**.
Stortenbeker, *Willem*, isomorphism of potassium and thallous salts, A., ii, 390.
detection of iodoform, A., ii, 424.
Stracke, *G. J.*, insensibility of higher plants towards their own poisons, A., ii, 853.
Strauss, *H.*, estimation of glycerol in soap-lyes, A., ii, 865.
Streintz, *Franz*, temperature-coefficient of the resistance of tantalum, A., ii, 432.
Strengers, *Th.* See *Ernst* **Cohen**.
Stritter, *Robert*, occurrence in milk serum of substances which react with naphthalene-β-sulphonic chloride, A., ii, 869.
Strong, *Richard P.*, virulence and immunising power of micro-organisms, A., ii, 843.
Strusiewicz, *Boleslaus von*, the nutritive value of amino-compounds, A., ii, 734.
Struthers, *Robert de Jersey Fleming*, some interactions of metallic cyanides with organic bases, P., 95.
Struthers, *Robert de Jersey Fleming*, and *James Ernest* **Marsh**, photographic radiation of some mercury compounds, T., 377; P., 67.
Struthers, *Robert de Jersey Fleming.* See also *James Ernest* **Marsh**.
Strutt, *Robert John*, radioactive minerals, A., ii, 787.
Stuart, *William*, etherisation as an aid in rhubarb forcing, A., ii, 756.
Stuchetz, *Josef*, substituted rhodanic acids and their aldehyde condensation products. IV., A., i, 933.
Stüber, *W.*, estimation of potassium nitrate in meats and flesh products, A., ii, 765.
Stüber, *W.* See also *K.* **Farnsteiner**.
Stuer, *Bernhard C.*, action of ammonia on sulphuryl chloride [and carbonyl chloride], A., i, 579.
Stuer, *Bernhard C.* See also *Arthur* **Hantzsch**.
Sturm, *E.* See *Georg W. A.* **Kahlbaum**.
Stutzer, *Albert*, and *W.* **Rothe**, action of some soil micro-organisms on ammonium sulphate and sodium nitrate, A., ii, 546.
Sudborough, *John Joseph*, and *Thomas Huws* **Davies**, diortho-substituted benzoic acid. Part VI. Conversion of methyl into ethyl esters, P., 87; discussion, P., 87.
Sudborough, *John Joseph*, and *Thomas Campbell* **James**, α-chlorocinnamic acids, P., 86.
Sudborough, *John Joseph*, and *David James* **Roberts**, esterification constants of substituted acrylic acids, T., 1840; P., 86.

Sudborough, *John Joseph*, and *Walter* **Thomas**, simple method for the estimation of acetyl groups, T., 1752; P., 88.

Süchting, *H.*, injurious action of crude potassium salts on potatoes, A., ii, 277.

Suida, *Wilhelm*, behaviour of coal-tar dyes towards starch, silicic acid, and silicates, A., i, 75.

influence of active groups in the textile fibres on the process of dyeing, A., i, 457.

Suida, *Wilhelm*. See also *P.* **Gelmo**.

Sulima, *A. Th.* See *E. S.* **London**.

Sullivan, *Eugene C.*, calcium sulphate in ammonium sulphate solution, A., ii, 453.

chemistry of ore deposition; precipitation of copper by natural silicates, A., ii, 642.

Sulser, *Jacob*. See *Stanislaus von* **Kostanecki**.

Suter, *Moritz*. See *Carl* **Graebe**.

Sutherst, *Walter Frederick*, weathered hay, A., ii, 649.

Suyver, *J. F.*, transformations of the isomeric trithioaldehydes, A., i, 741.

Suzuki, *Shigehiro*, injurious effect of an excess of lime applied to the soil, A., ii, 347.

manuring with kainite, A., ii, 348.

Suzuki, *Umetarō*. See *Emil* **Fischer**.

Suzzi, *Filippo*, use of mineral oil for the determination of the Maumené figure of oils, A., ii, 619.

Svedberg, *The.*, electric preparation of colloidal metals, A., ii, 817.

Svientoslavski, *V.* See *Wladimir G.* **Schaposchnikoff**.

Svoboda, *Hanno*, Märcker-Bühring's solution, Wagner's magnesium citrate mixture, and ferrous citrate magnesium mixture, A., ii, 419.

Swain, *Robert E.*, urine of the coyote, A., ii, 186.

Swellengrebel, *N. H.*, plasmolysis and turgor-regulation of pressed yeast, A., ii, 473.

Symes, *William Legge*, Neumann's method of estimating chlorides, A., ii, 416.

Symmers, *Douglas*, organic phosphorus in urine, A., ii, 102.

Szabrański, *Wladislaus*. See *Stanislaus von* **Kostanecki**.

Szeki, *Tiberius*. See *Rudolf* **Fabinyi**.

Szlagier, *Anton von*. See *Stanislaus von* **Kostanecki**.

T.

Taboury, *Félix*, mixed phenolic sulphides, A., i, 56.

action of sulphur on the organomagnesium derivatives of *p*-bromoanisole and -phenetole, A., i, 644.

Tafel, *Julius*, polarisation observed during cathodic liberation of hydrogen, A., ii, 223.

Tafel, *Julius*, and *Bruno* **Emmert**, cause of the spontaneous depression of the cathode potential in the electrolysis of dilute sulphuric acid, A., ii, 569.

Tafel, *Julius*, and *Paul* **Lavaczeck**, thiopyrrolidone, A., i, 465.

Tafel, *Julius*, and *Kurt* **Naumann**, relation between cathode potential and electrolytic reducing action, A., ii, 224.

Tafel, *Julius*, and *Hermann* **Stern**, ethyl diaminosuccinate, A., i, 417.

Takahashi, *Teizō*, can nitrite provide oxygen in anaërobic culture of Bacteria? A., ii, 340.

is germination possible in absence of air? A., ii, 343.

detection and estimation of fusel oil, A., ii, 358.

some new varieties of Mycoderma yeast, A., ii, 473.

Tambor, *Josef*. See *Axel* **Blom**.

Tamburello, *Antonio*, lactone of triacetic acid, A., i, 258.

Tamburello, *Antonio*. See also *Alberto* **Peratoner**.

Tammann, *Gustav* [*Heinrich Johann Apollon*], action of silicon on hydrated metatitanic acid, A., ii, 256.

employment of thermal analysis in abnormal cases, A., ii, 444.

Tammann, *Gustav*. See also *W.* **Guertler**, *K.* **Hüttner**, *Max* **Levin**, and *N.* **Slatowratsky**.

Tanatar, *Sebastian M.*, perstannic acids and perstannates, A., ii, 325.

Tangl, *Franz*, [with *Michael* **Korbuly**, *Stephan* **Weiser**, and *Arthur* **Zaitschek**], feeding and metabolism of agricultural animals, A., ii, 757.

Tanret, *Charles* [*Joseph*], transformation of sugars showing multirotation, A., i, 327.

Tanret, *Georges*, gentiopicrin, A., i, 655.

gentiin, A., i, 714.

gentiamarin, A., i, 803.

Tappeiner [(*Edler*) **von Tappein**], [*Anton Josef Franz*] *Hermann*, [with *A.* **Jodlbauer** and *Hans* **Lehmann**], photodynamic and optical behaviour of anthraquinones, A., ii, 602.

Tappeiner, *Hermann von.* See also *A.* **Jodlbauer.**
Tarugi, *Nazareno*, formation and constitution of bleaching powder, A., ii, 32.
red coloration of bleaching powder, A., ii, 163.
supposed existence of thiocyanate of iron and probable constitution of the hæmoglobin of the blood, A., i, 176.
histological changes in wool-fibre by the prolonged action of water; chemical nature of the wax of corpses, A., ii, 182.
aluminium as a preventive of acute and chronic mercury poisoning, A., ii, 205.
Tarugi, *Nazareno*, and *S.* **Silvatici**, volumetric estimation of iron, A., ii, 66.
Tassin, *Wirt*, the Mount Vernon meteorite, A., ii, 399.
Tatlock, *Robert Rattray*, and *Robert Tatlock* **Thomson**, estimation of small proportions of bromine and chlorine in iodine, A., ii, 281.
Tattersall, *George.* See *William Henry* **Perkin**, *jun.*
Taurel, assay of glycerol, A., ii, 121.
Taurke, *Fritz*, organic silicon compounds, A., i, 422.
Taurke, *Fritz.* See also *Hans* **Riesenfeld.**
Taylor, *Francis.* See *Thomas Stewart* **Patterson.**
Taylor, *Levi Shoemaker.* See *Harmon Northrup* **Morse.**
Taylor, *William White*, new method of preparing esters, A., i, 852.
Teeple, *John Edgar.* See *William Ridgely* **Orndorff.**
Teichner, *Herbert*, constitution of the hydroxyazo-compounds, A., i, 952.
Teichner, *Herbert*, and *Hugo* **Weil**, preparation of 2-hydroxy-1:4-naphthaquinone, A., i, 909.
Telesnin, *L.*, fermentation-coefficient of dead yeast (zymin) on various substrata, A., ii, 342.
Teletoff, *Johann.* See *Carl Adam* **Bischoff.**
Telle, *Fernand*, bromine absorption of fats, A., ii, 362.
Tempany, *Harold A.* See *Francis* **Watts.**
Terlinck, *Égide*, dehydration of α-isodypnopinacolin. I., A., i, 129.
Terroine, *E. F.* See *H.* **Bierry.**
Terry, *Oliver P.* See *Charles Hugh* **Neilson.**
Teruuchi, *Yutaka.* See *Emil* **Abderhalden.**
Theodor, *Hermann*, amount of water in butters of various origin, and their Reichert-Meissl numbers, A., ii, 361.
Theodorovits, *K.* See *Lothar* **Wöhler.**
Theopold, *Wilhelm.* See *Franz* **Kunckell.**
Thesmar, *Georges.* See *Luc.* **Baumann.**
Thiel, *Kurt.* See *Otto* **Ruff** and *Alfred* **Stock.**
Thiele, [*Friedrich Karl*] *Johannes*, and *W.* **Peter**, aliphatic iodochlorides and iodosochlorides, A., i, 735.
Thiele, *Reinhold.* See *Conrad* **Willgerodt.**
Thierfelder, *Hans*, cerebron, A., i, 105, 621.
Thierry, *Maurice de*, new apparatus for the determination of melting points, A., ii, 627.
Thill, *J.*, improvement of Drown and Shimer's method of estimating silicon in irons, A., ii, 62.
Thöni, *Johannes.* See *Ed. von* **Freudenreich.**
Thomae, *Carl*, compounds of ketones with ammonia; methyl ethyl ketone ammonia, A., i, 509.
derivatives of *p*-aminotriphenylmethane, A., i, 586.
compounds of ketones with ammonia; diethyl ketone ammonia, A., i, 684.
compounds of ketones with ammonia; benzophenone ammonia (iminobenzophenone), A., i, 718.
Thomas, *Herbert Henry*, epidote from Inverness-shire, A., ii, 537.
Thomas, (*Miss*) *M. B.*, and *Humphrey Owen* **Jones**, optically active nitrogen compounds, A., i, 263.
Thomas, *Walter.* See *John Joseph* **Sudborough.**
Thompson, *Gustave W.*, estimation of acetic acid in white lead, A., ii, 556.
Thompson, *Herbert Bryan.* See *Alexander* **McKenzie.**
Thompson, *Kenworthy J.* See *Arthur* **Hantzsch.**
Thompson, *William Henry*, metabolism of arginine, A., ii, 268, 839.
effect of chloroform and ether on renal activity, A., ii, 273.
Thoms, *Hermann*, use of potassium bismuth iodide for the estimation of alkaloids, A., ii, 561.
Thomsen, [*Hans Peter Jürgen*] *Julius*, theory of the heat of combustion and the heat of formation of hydrocarbons in the gaseous state, A., ii, 231.
relative value of the calorimetric methods used in the determination of the heat of combustion of volatile organic substances, A., ii, 435.

Thomsen, [*Hans Peter Jürgen*] *Julius*, numerical results of a systematic investigation of the heats of combustion and formation of volatile organic compounds, A., ii, 571.
relative value of calorimetric methods, A., ii, 801.
[thermochemical studies], A., ii, 801.

Thomsen, *Th. Sv.*, estimation of fat in milk deficient in fat, A., ii, 773.

Thomson, *Joseph John*, emission of negative corpuscles by the alkali metals, A., ii, 791.
rate of recombination and the size of gaseous ions, A., ii, 797.

Thomson, *Robert Tatlock*. See *Robert Rattray* **Tatlock**.

Thorne, *Norman C.*, precipitation of barium bromide by hydrobromic acid, A., ii, 118.

Thorpe, *Jocelyn Field*, the constitution of glutaconic acid, T., 1669; P., 239.

Thorpe, *Jocelyn Field*. See also *Ernest Francis Joseph* **Atkinson**, *Francis Vernon* **Darbishire**, and *Harold* **Rogerson**.

Thorpe, *Thomas Edward*, the analysis of samples of milk referred to the Government Laboratory in connection with the Sale of Food and Drugs Acts, T., 206; P., 63.

Thugutt, *Stanislaus Józef*, origin of sodalite in syenites, A., ii, 175.
reactions for distinguishing calcite and dolomite, A., ii, 421.

Thunberg, *Torsten*, micro-respirometric investigations, A., ii, 44.
gas exchange in some lower animals and its dependence on partial pressure of oxygen, A., ii, 728.

Tichborne, *Charles Robert Clarke*, a method in qualitative analysis for determining the presence of certain metallic oxides, A., ii, 556.

Tichwinsky, *Michael M.*, interaction of zinc ethyl and benzenediazonium chloride. III., A., i, 92.
action of zinc ethyl on phenylazoethane, A., i, 93.

Tichwinsky, *Michael M.*, and *L.* **Wolochowitsch**, acetylation of dihydrophenazine, A., i, 383.

Tiffeneau, *Marc*, methoethenylbenzene [phenylmethylethylene] oxide, A., i, 523.

Tiffeneau, *Marc*. See also *Auguste* **Béhal** and *Ernest* **Fourneau**.

Tigerstedt, *Carl*, phosphorus metabolism in man, A., ii, 332.

Tijmstra, *Sijbe, jun.*, Marckwald's asymmetric synthesis of optically active valeric acid, A., i, 257.
introduction of carboxyl groups into phenol by the action of carbon dioxide. I. Salicylic acid, A., i, 439.
ionic velocities, A., ii, 499.

Tijmstra, *Sijbe, jun.* See also *Cornelis Adriaan Lobry de* **Bruyn**.

Tilden, *William Augustus*, presidential address, T., 546; P., 104.
the relation of specific heat to atomic weight in elements and compounds, T., 551; P., 104.

Tilden, *William Augustus*, and *Harry* **Burrows**, pinene isonitrosocyanide and its derivatives, T., 344; P., 94.

Tilden, *William Augustus*, and *Joseph Arthur* **Stokes**, the action of magnesium methyl iodide on pinene nitrosochloride, T., 836; P., 183.

Tillmans, *Josef*. See *A.* **Olig**.

Timoféeff, *Wladimir F.*, heats of formation of mixtures and of non-aqueous solutions, A., ii, 678.

Tingle, *Alfred*, phenyliso-oxazolone, A., i, 930.

Tingle, *John Bishop*, and *William Edwin* **Hoffman**, *jun.*, condensation compounds of camphoroxalic acid and amines, A., i, 799.

Tinkler, *Charles Kenneth*. See *James Johnston* **Dobbie**.

Titherley, *Arthur Walsh*, benzoyl derivatives of salicylamide, P., 288.

Titherley, *Arthur Walsh*, and *William Longton* **Hicks**, labile isomerism among benzoyl derivatives of salicylamide, T., 1207; P., 219.

Tobilewitsch, *Nasar*. See *Carl Adam* **Bischoff**.

Tobler, *Ludwig*, digestion of proteids in the stomach, A., ii, 642.

Tochtermann, *Leon*, action of thionyl chloride on thiobenzamide, A., i, 595.

Tollens, *Bernhard* [*Christian Gottfried*], estimation of glycuronic acid, A., ii, 559.

Tollens, *Bernhard*, and *A. D.* **Maurenbrecher**, the diphenylhydrazones of *l*-arabinose and of xylose, A., i, 262.

Tollens, *Bernhard*. See also *W. B.* **Ellett** and *W.* **Mayer**.

Tollens, *Karl*, action of cresol in comparison with phenol, A., ii, 339.

Tolloczko, *Stanislaw*. See *Ludwik* **Bruner**.

Tolman, *Lucius Moody*, detection of archil, cudbear, and other lichen colours, A., ii, 215.

Tommasi, *Donato*, a new isomeric modification of aluminium hydroxide, A., ii, 712.
Tommasina, *Thomas*. See *Ed.* **Sarasin**.
Tornani, *Ercole*. See *Giuseppe* **Bruni**.
Torrese, *R.*, reactions for distinguishing between nicotine and cicutine, A., ii, 778.
Torrey, *Henry Augustus*, and *H.* **Hardenbergh**, dissociation of phenoquinone and quinhydrone, A., i, 218.
Torrey, *Henry Augustus*, and *W. H.* **Hunter**, action of potassium iodide on bromanil and chloranil, A., i, 217.
Tóth, *Julius*, apparatus for determining the differences shown by tobaccos when burnt [smoked] A., ii, 216.
Touplain. See *Fréd.* **Bordas**.
Tousley, *Nelson Elbridge*, and *Moses* **Gomberg**, certain tri-*p*-tolylmethane derivatives, A., i, 43.
Tower, *Olin Freeman*, constitution of certain organic salts of nickel and cobalt as they exist in aqueous solution, A., i, 410.
action of nitrogen on water-vapour at high temperatures, A., ii, 814.
Townsend, *John Sealy Edward*, and *H. E.* **Hurst**, genesis of ions by the motion of positive ions and a theory of the sparking potential, A., ii, 7.
Toyonaga, *Masato*, behaviour of sodium fluoride towards blood, A., ii, 332.
amount of lime in different animal organs, A., ii, 335.
Trannoy, *René*. See *Camille* **Matignon**.
Traquair, *John*. See *Charles Frederick* **Cross**.
Traube, *Isidor*, theories on osmosis, solubility, and narcosis, A., ii, 13.
Traube. *Wilhelm*, γδ-dihydroxypropylmalonic acid, A., i, 13.
2-aminoadenine (2:6-diaminopurine), A., i, 101.
Traube, *Wilhelm*, and *A.* **Schönewald**, electrolytic oxidation of ammonia, A., ii, 242.
Traubenberg, *Heinrich* (*Freiherr*) *Rausch von*, Hall effect of bismuth at high temperatures, A., ii, 502.
Trautz, *Max*, chemiluminescence, A., ii, 662.
Trautz, *Max*, and *P.* **Schorigin**, crystalloluminescence and triboluminescence, A., ii, 494.
Travers, *Morris William*, and *Alfred G. C.* **Gwyer**, comparison of the platinum scale of temperature with the normal scale at temperatures between 444° and − 190°, with notes on constant temperatures below the melting point of ice, A., ii, 372.
Travers, *Morris William*. See also *Francis Lawry* **Usher**.
Treboux, *O.*, nutrition of green plants with nitrogen, A., ii, 276.
Trechzinsky, *R. M.* See *Nicolai A.* **Pushin**.
Trenkner, *Carl*. See *Alexander* **Gutbier**.
Trevor, *Joseph Ellis*, certain heats of dilution, A., ii, 231.
dependence of free energy on temperature, A., ii, 372.
Trevor, *Joseph Ellis*. See also *James M.* **Bell**.
Tribot, *J.*, heat value of nervous and muscular tissues in guinea pigs of different age, A., ii, 542.
Tribot, *J.*, and *H.* **Chrétien**, a colloidal iron hydroxide obtained by electrodialysis, and some of its properties, A., ii, 166.
Trieschmann, *Armin*. See *Paul* **Pfeiffer**.
Trillat, *J. Auguste*, the formation of formaldehyde in the combustion of tobacco, A., ii, 53.
presence and formation of formaldehyde in various combustions, A., i, 325.
presence of formaldehyde in the atmosphere of towns, A., i, 325.
Trillat, *J. Auguste*, and **Sauton**, [occurrence of ammonia in contaminated milk], A., ii, 490.
Trillat, *J. Auguste*, and **Turchet**, new process for detecting ammonia; application for characterising the purity of waters, A., ii, 282.
Trimbach, *R.*, action of methyl and ethyl chloro-oxalates on cyanoacetic esters, A., i, 323.
action of methyl and ethyl chloro-oxalates on acetylacetone, A., i, 565.
Tröger, [*Karl*] *Julius* [*Ludwig*], and *Waldemar* **Hille**, amides, nitriles, and thioamides of arylsulphonacetic acids, A., i, 336.
Tröger, *Julius*, and *Paul* **Vasterling**, action of alkyl haloids on the sodium derivatives of arylsulphonacetonitriles, A., i, 870.
Tröger, *Julius*, and *Franz* **Volkmer**, action of potassium ethyl xanthate on monohalogen substituted fatty acids and their derivatives, A., i, 15.
action of phenylhydrazine on arylthiosulphonated ethyl acetoacetate, A., i, 89.
formation of additive compounds from hydroxylamine and arylsulphonacetonitriles, A., i, 356.
Trovanelli, *Arturo*. See *Giuseppe* **Bruni**.
Trozki, *Saul*. See *Carl Adam* **Bischoff**.

Truchot, *P.*, test for molybdenum, A., ii, 614.
estimation of titanic acid in minerals, A., ii, 614.
Truffaut, *Georges*. See *Alexandre* **Hébert**.
Tscharno, *J. S.* See *Theodor* **Posner**.
Tschelinzeff, *Wladimir*, theory of the Grignard reaction and a new method for the preparation of organo-magnesium compounds, A., i, 40.
conversion of organo-magnesium compounds into Grignard-Baeyer oxonium compounds and the thermochemical investigation of this reaction, A., ii, 802.
Tschermak, *Gustav*, preparation of silicic acids by the decomposition of natural silicates, A., ii, 816.
Tscherne, *Rudolf*. See *Josef* **Herzig**.
Tschernobéeff, *D.*, estimation of perchlorates and chlorates in saltpetre, A., ii, 416.
heat of formation of silicates, A., ii, 678.
Tschirch, [*Wilhelm Oswald*] *Alexander*, the exudation of resins, A., ii, 413.
easy way of distinguishing English from Chinese rhubarb, A., ii, 659.
Tschirch, *Alexander*, and *U.* **Cristofoletti**, root of *Rheum Rhaponticum*, A., ii, 851.
Tschirch, *Alexander*, and *P. A. A. F.* **Eijken**, rhizomes of *Rheum palmatum* and *Rheum officinale* cultivated in Berne, A., ii, 605.
Tschirch, *Alexander*, and *O.* **Hoffbauer**, aloes, A., i, 913.
Tschirch, *Alexander*, and *O.* **Müller**, the albans and fluavil of Sumatra gutta-percha, A., i, 453.
albans of Mikindani-caoutchouc from German East Africa, A., i, 453.
gutta-percha from German New Guinea, A., i, 452.
Tschirch, *Alexander*, and **Paul**, euphorbium, A., i, 538.
Tschirch, *Alexander*, and *E.* **Scheres-chewski**, chicle gum, A., i, 685.
balata, A., i, 713.
Tschischikoff, *A.* See *Oscar* **Lutz**.
Tschitschibabin, *Alexei E.*, Ullmann and Borsum's "hexaphenylethane"; tervalency of carbon, A., i, 125.
structural formula for triphenylmethyl, A., i, 270.
new syntheses [of esters] with magnesium organo-compounds, A., i, 283.
Tschugaeff, *Leo A.*, xanthogen reaction and its application to the terpene and camphor series. II., A., i, 71.
Tschugaeff, *Leo A.*, preparation of xanthogen compounds, A., i, 166.
complex compounds of α-dioximes, A., i, 743.
complex compounds of organic imides; succinimide copper derivatives, A., i, 865.
triboluminescence. II., A., ii, 132.
a new delicate reagent for nickel, A., ii, 613.
Tschugaeff, *Leo A.*, and *N. A.* **Schloesinger**, attempt to synthesise hæmopyrrole, A., i, 231.
Tubandt, *Carl*, estimation of sodium ethoxide with menthone, A., ii, 424.
nickelic salts, A., ii, 459.
alkaline cobaltous solutions, A., ii, 591.
Türk, *Hans*. See *Carl Dietrich* **Harries**.
Tullo, *F. W.*, influence of different sugar solutions on the temperatures at which various yeasts are killed, A., ii, 412.
Tulloch, *Forbes Mason Grantt*. See *William Boog* **Leishman**.
Turchet. See *J. Auguste* **Trillat**.
Turnau, *Richard*, abnormal salts of betaines and pyridinecarboxylic acids, A., i, 546
Turner, *William Ernest Stephen*. See *Alexander* **Findlay**.
Tutin, *Frank*. See *Frederick Belding* **Power**.
Tutton, *Alfred Edwin Howard*, the relation of ammonium to the alkali metals. A study of ammonium magnesium and ammonium zinc sulphates and selenates, T., 1123; P., 177.
topic axes, and the topic parameters of the alkali sulphates and selenates, T., 1183; P., 217.

U.

Ubbelohde, *Leo*, the true dropping point and an apparatus for determining it, A., ii, 658.
Ubbelohde, *Leo*. See also *David* **Holde**.
Übel, *Max*, apparatus for preparing hydrogen or carbon dioxide, A., ii, 239.
Ujhelyi, *Imre*, [the amount of fat in] goats' milk, A., ii, 772.
Ulbricht, *Richard*, pot experiments [on the action of lime and magnesia] on barley, A., ii, 277.
Ullmann, *Fritz*, and *J. S.* **Ankersmit**, new naphthazine syntheses from *o*-aminoazo-compounds, A., i, 553.

Ullmann, *Fritz*, and *L.* **Frentzel**, action of cuprous chloride on aryldiazonium salts, A., i, 308.

Ullmann, *Fritz*, and *Hermann* **Kipper**, chloromethoxybenzoic acid, A., i, 596.

Ullmann, *Fritz*, and *Alfred* **Lehner**, benzophenonesulphone, A., i, 289.

Ullmann, *Fritz*, and *Anna* **Mourawiew-Winigradoff**, phenylchrysofluorene, A., i, 642.

Ullmann, *Fritz*, *Paul* **Sponagel**, [and, in part, **Stein**], phenylation of phenols, A., i, 644.

Ullmann, *Fritz*, and *Marguerite* **Zlokasoff**, arylsalicylic [aryloxybenzoic] acids and their conversion into xanthones, A., i, 597.

Ulpiani, *Celso*, synthesis of nitro-esters, A., i, 9.

constitution of the fulminuric acids, A., i, 750.

Ulpiani, *Celso*, and *Masaniello* **Cingolani**, biochemical mechanism of the fermentation of uric acid, A., ii, 190.

Ulpiani, *Celso*, and *G. A.* **Rodano**, electro-synthesis among the cyano-derivatives, A., i, 260.

Underhill, *Frank Pell*, experimental diabetes, A., ii, 187, 844.

Underhill, *Frank Pell*, and *Oliver E.* **Closson**, physiological behaviour of methylene-blue and methylene-azure, A., ii, 471.

Underhill, *Frank Pell*. See also *Lafayette Benedict* **Mendel**.

Upton, *George Burr*. See *Earnest Stanley* **Shepherd**.

Urbain, *Édouard*, *L.* **Saugon**, and *A.* **Feige**, saponification of cocoanut oil by cytoplasm, A., i, 108.

Urbain, *Georges*, yttrium earth related to gadolinium, A., ii, 35.

purification of gadolinium; atomic weight of gadolinium, A., ii, 250.

new spectrum of gadolinium, A., ii, 458.

isolation of terbium, A., ii, 711.

Urban, *J.* See *Karl* **Andrlík**.

Usher, *Francis Lawry*, and *Morris William* **Travers**, the interaction of sulphuretted hydrogen and arsenic pentoxide in presence of hydrochloric acid, T., 1370; P., 223.

Utescher, *Kurt*. See *Wilhelm* **Biltz**.

Utz, *Franz*, decomposition of gallotanic acid, A., i, 135.

estimation of nitric acid in waters, A., ii, 283.

volatility of lactic acid with water vapours, A., ii, 361.

detection of hydrogen peroxide in milk, A., ii, 415.

Utz, *Franz*, new test for formalin in milk, A., ii, 560.

V.

Vaillant, *P.*, influence of concentration on the magnetic properties of solutions of cobalt, A., ii, 503.

Vaillant, *Victor*, action of carbonyl chloride on the copper derivative of benzoylacetone and on dithiobenzoylacetone, A., i, 460.

Valenta, *Eduard*, rosin spirit, pine wood oils, and turpentines, A., ii, 657.

Valenti, *L.*, meconic acid, A., i, 788.

Valentiner, [*Richard Wilhelm*] *Siegfried*, and *Rudolf* **Schmidt**, new method of preparation of neon, krypton, and xenon, A., ii, 704.

Valentiner, *Siegfried*. See also *Ernst* **Dorn**.

Valeur, *Amand* [*Charles*]. See *Charles* **Moureu**.

Vallée, *C.*, action of phenylcarbimide on sulphonic acids, A., i, 771.

Vallety, estimation of copper and free matte in dross, A., ii, 483.

Vandevelde, *Albert Jacques Joseph*, resistance of the corpuscles of fœtal blood, A., ii, 836.

influence of concentration of blood-corpuscles and the form of the reagent vessel on hæmolysis by chemical reagents, A., ii, 836.

Vaney, *C.*, and *F.* **Maignon**, variations in dextrose, glycogen, fat, and albumin in the course of the metamorphoses in the silk-worm, A., ii, 406.

influence of sex on the nutrition of *Bombyx mori* in the last periods of its metamorphosis; localisation of glycogen, fat, and soluble albumin in the course of nymphosis, A., ii, 467.

Vaňha, *Johann*, *Otto* **Kyas**, and *Josef* **Bukovansky**, influence of the composition of barley on the development, quality, and productivity, and on the transmission of these properties, A., ii, 755.

Vanino, *Ludwig*, gold hydrosols, A., ii, 171.

supposed solubility of aurous oxide in water, A., ii, 172.

Vanino, *Ludwig*, and *J.* **Gans**, Bologna phosphorus [phosphorescent sulphides], A., ii, 248.

Varenne, *Eugène*, and *L.* **Godefroy**, anethoglycol [γ-*p*-methoxyphenylpropane-$\beta\gamma$-diol], A., i, 282.

Varet, *Raoul*, mercury formates, A., ii, 504.

Vasterling, *Paul*. See *Julius* **Tröger**.

Vaubel, [*Johann*] *Wilhelm*, action of ammonium nitrite, and ammonium nitrate (or of nascent hydrogen, and of nitrous oxide) on aromatic compounds, A., i, 189.

relation between the size of the molecular complex and the temperature-coefficient of expansion in different states of aggregation, A., ii, 74.

Vaubel, *Wilhelm*, and *Eberhardt* **Bartelt**, estimation of boric acid, A., ii, 554.

Vaubel, *Wilhelm*, and *Otto* **Scheuer**, benzylethylaniline and benzylideneaniline, A., i, 274.

source of error in the estimation of acetone by the iodoform process, A., ii, 291.

Vaughan, *Victor Clarence*, contribution to cell chemistry, A., ii, 189.

Vecchiarelli, *V.* See *Federico* **Giolitti**.

Veiel, *O.* See *Otto* **Fischer**.

Veitch, *Fletcher Pearre*, estimation of potassium in soils, plants, and fertilisers, A., ii, 204.

Veley, *Victor Herbert*, hydrolysis of ammonium salts, T., 26.

Veley, *Victor Herbert*, and *John Job* **Manley**, refractive indices of sulphuric acid at different concentrations, A., ii, 781.

Velich, *Alois*, betaine, A., ii, 106.

Velich, *Alois*, and *Vladimír* **Staněk**, chemico-physiology of betaine. II., A., ii, 266.

Venditori, *Domenico*. See *Italo* **Bellucci**.

Veraguth, *Hans*. See *Richard* **Willstätter**.

Verley, *Albert*, alkyl ethers of *p*-allylphenol, A., i, 127.

Vernon, *Horace Middleton*, universal presence of erepsin in animal tissues, A., ii, 100.

the ereptic power of tissues as a measure of functional capacity, A., ii, 841.

Verschaffelt, *Eduard*, measure for the action of poisons on plants, A., ii, 853.

Veselý, *Victor*, 2:2-dinaphtha-1:1-imine [αα-di-β-naphthacarbazole], A., i, 236.

Viard, *Georges* [*Marie Joseph*], composition of homologues of "Schweinfurt's green," A., i, 8.

Victor, *Ernst*, tin analysis, A., ii, 287.

Vidal, *Raymond*, the presence and action of mercaptan groups in direct sulphur dyes, A., i, 306.

Vidal, *Raymond*, the constitution of nitrosophenols and the conception of ortho-, meta-, and para-positions, A., i, 521.

Vigneron, estimation of quinine in cinchona barks, A., ii, 363.

Vignon, *G.* See *François* **Couturier**.

Vignon, *Léo*, limits of coupling of diazobenzene with aniline, A., i, 250.

detection of free yellow phosphorus in phosphorus sulphide, A., ii, 479.

Vignon, *Léo*, and *Adolphe* **Simonet**, diazoamino-compounds derived from diphenylamine and the homologues of aniline and the naphthylamines, A., i, 397.

secondary diazoamino-compounds, A., i, 494.

Vigouroux, *Émile*, reduction of oxides, a new method of preparing the binary compound, $SiMn_2$, by means of aluminium, A., ii, 822.

Vila, *Antony*, and *M.* **Piettre**, spectroscopy of blood and of oxyhæmoglobin, A., i, 621; ii, 402.

fluorides of oxyhæmoglobin, A., i, 847.

Vila, *Antony*. See also *M.* **Piettre**.

Ville, *Jules* [*Joseph Mathieu*], and *Eugène* **Derrien**, modification of the spectrum of methæmoglobin under the action of sodium fluoride, A., i, 399.

methæmoglobin and its fluorine compound, A., i, 500, 622.

Ville, *Jules*. See also *Charles* **Astre**.

Villemontée, *P. Gouré de*, liquid dielectrics, A., ii, 624.

Vincent, *E.*, tetanus and quinine, A., ii, 104.

Vincent, [*Thomas*] *Swale*, and *W. A.* **Jolly**, functions of thyroid and parathyroid glands, A., ii, 101.

Virgili, *Juan Fayes*, estimation of arsenic as magnesium pyroarsenate, A., ii, 652, 858.

Visser, *Arie Wilkert*, autocatalysis and the transformation of γ-hydroxy-acids, with and without addition of other acids, conceived as an ion reaction, A., ii, 511.

reaction velocity and chemical equilibrium in homogeneous systems and their bearings on cases of enzyme action, A., ii, 577.

Visser, *H. L.*, estimation of dextrose in urine, A., ii, 359.

Vitali, *Dioscoride*, alkaloid salts of methylarsonic acid (arrhenalic acid), A., i, 657.

interference of mercuric chloride with the formation of arsenic, antimony, and phosphorus hydrides, A., ii, 354.

Vítek, *Eugen.* See *Julius* **Stoklasa.**
Vitoria, *Edouard*, trichloroisopropyl alcohol, A., i, 110.
Vittenet, [*Alfred Etienne*] *Henri*, a new cause of dissociation of mercuric chloride and its influence on the antiseptic properties of solutions of corrosive sublimate, A., ii, 35.
Vittenet, *Henri*, and **Chenu**, a new cause of dissociation of mercuric chloride, A., ii, 711.
Viullemin, *A.* See *C.* **Hartwich.**
Voelcker, *John Augustus*, [pot-culture experiments on the influence of the iodides and oxides of manganese, potassium, sodium, and lithium on wheat and barley], A., ii, 754.
Völtz, *W.*, influence of different proteids, asparagine, and lecithin in nitrogenous metabolism, A., ii, 403.
Voerman, *Gerardus Leonardus*, anhydrides of saturated dibasic acids and Baeyer's tension theory, A., i, 13.
Voerman, *Gerardus Leonardus.* See also *Emil* **Baur** and *Jacobus Henricus van't* **Hoff.**
Vogdt, *K.* See *Volkmar* **Kohlschütter.**
Vogel, *Ignaz*, assimilation of free elementary nitrogen by micro-organisms, A., ii, 646, 750.
Vogel, *Ignaz.* See also *Max* **Gerlach.**
Vogel, *Rudolf*, gold-lead alloys, A., ii, 462.
gold-tin alloys, A., ii, 640.
Voghera, *Mario.* See *Mario Giacomo* **Levi.**
Voigt, *Ernst.* See *Alexander* **Naumann.**
Voigt, *Karl*, tube apparatus for drying in a current of carbon dioxide, A., ii, 551.
Volhard, *Justus.* See *Albin* **Köhler.**
Volkmer, *Franz.* See *Julius* **Tröger.**
Voller, [*Carl*] *August*, properties of radium in small quantities, A., ii, 663.
Vollers, *H.*, improved Gooch crucibles, A., ii, 855.
Vondráček, *Rudolf*, influence of metals on the hydrolysis of sucrose, A., ii, 151.
Vondráček, *Rudolf.* See also *Emil* **Votoček.**
Vongerichten, *Eduard*, derivatives of morphenol, A., i, 542.
Vongerichten, *Eduard*, and *Carl* **Weilinger**, aminocodeine, A., i, 542.
Voorhees, *Edward Burnett*, and *Jacob G.* **Lipman**, experiments on the accumulation and utilisation of atmospheric nitrogen in the soil, A., ii, 477.
Vorländer, *Daniel*, [with *Otto* **Rolle**, *Carl* **Siebert**, and *Paul* **Weissheimer**], addition of acids and salts to $\alpha\beta$-unsaturated ketones, A., i, 792.
Vortmann, *Georg*, and *A.* **Metzl**, estimation of antimony as trisulphide and the separation of antimony from tin, A., ii, 655.
Voswinkel, *Arnold*, condensation products from tannin, formaldehyde, and carbamide or carbamates, A., i, 805.
Votoček, *Emil*, and *Rudolf* **Vondráček**, the so-called scammonose, A., i, 74.
mutual replacement of sugar residues in hydrazones, A., i, 377.
Vranceano, *P.* See *H.* **Guillemard.**

W.

Waals, *Johannes Diderik van der*, shape of the sections of the surface of saturation normal to the x-axis in case of a three-phase pressure between two temperatures, A., ii, 683.
the (T, x) equilibria of solid and fluid phases for variable values of the pressure, A., ii, 683.
Wada, *Tsunashirō*, [naëgite, a new mineral], A., ii, 177.
Wade, *John*, the influence of water and alcohols on the boiling point of esters. I. A modification of Markownikoff's method of preparation, T., 1656; P., 240.
Wadmore, *John Mello*, notes on sodium alum, P., 150; discussion, P., 150.
Waegner, *Anton*, neodymium oxide, A., ii, 35.
Waentig, *Percy*, chemistry of phosphorescing sulphides of the alkaline earths, A., ii, 365.
Waerden, *H. van der.* See *D. J.* **Hissink.**
Wagenknecht, *Walter.* See *Alexander* **Gutbier.**
Wagner, *H.* See *H.* **Sprinkmeyer.**
Wagner, *Hans.* See *Theodor* **Zincke.**
Wagner, *Paul*, *Robert* **Dorsch**, *H.* **Ruths**, and *Georg* **Hamann**, potassium manuring, A., ii, 551.
Wagner, *Waldemar.* See *Ernst* **Schmidt.**
Wahl, *André* [*R.*], ethyl acetylisonitrosoacetoacetate, A., i, 408.
constitution of diketobutyric ester phenylhydrazones, A., i, 474.
Wahl, *André.* See also *Louis* **Bouveault.**
Wahle, *Karl.* See *August* **Michaelis.**
Wakeman, *Alfred John*, nitrogen distribution in the liver of the sturgeon, A., ii, 467.
chemical changes in the liver in phosphorus poisoning, A., ii, 470.
hexone bases of liver tissue, A., ii, 841.

Walbaum, *Heinrich* [*Wilhelm*], and *O.* **Hüthig,** occurrence of a dihydrocuminol in ginger grass oil, A., i, 53.
ginger grass oil, A., i, 603.
Walbum, *L.* See *Thorvald* **Madsen.**
Walden, *Paul,* the rotation of optically active substances, A., ii, 130.
Walden, *Percy Talbot,* acid oxalates of ammonium, A., i, 679.
Waldvogel, *Richard,* conditions for the formation of acetone [in the body], A., ii, 735.
Walker, (*Mrs.*) *Annie Purcell.* See *James* **Walker.**
Walker, *C. E.* See *J. E.* **Farmer.**
Walker, *James,* theory of amphoteric electrolytes. II., A., ii, 138.
Walker, *James,* and *John* **Johnston,** tetramethylammonium hydroxide, T., 955; P., 210.
Walker, *James,* and (*Mrs.*) *Annie Purcell* **Walker,** tetraethylsuccinic acid, T., 961; P., 210.
Walker, *James Wallace,* and (*Miss*) *Mary Violette* **Dover,** the iodides of copper, T., 1584; P., 232.
Walker, *James Wallace,* and *Frederick Murray Godschall* **Johnson,** the interaction of alcohols and phosphorous halides, T., 1592; P., 232.
the electrical conductivities of some salt solutions in acetamide, T., 1597; P., 233.
Wallach, *Otto,* terpenes and ethereal oils, A., i, 709.
Wallach, *Otto,* [with *Erich* **Böcker** and *W.* **Fritzsche**], terpenes and ethereal oils. LXX. Compounds of the thujone series, A., i, 147.
Wallach, *Otto,* [with *Hugo* **Köhler**], terpenes and ethereal oils; constitution of eucarvone and its reduction products, A., i, 450.
Wallach, *Otto,* [with *Petros* **Rhoussopoulos**], cyclic bases from methylheptenone, A., i, 818.
Wallach, *Otto.* See also *Hans* **Landolt.**
Wallée, *E.* See *Alexandre* **Étard.**
Waller, *Augustus Désiré,* photo-electrical effects in frog's eyeball, A., ii, 545.
Waller, *Augustus Désiré,* and *Bertram James* **Collingwood,** estimation of inspired and expired chloroform, A., ii, 424.
Wallerant, *Frédéric* [*Félix Auguste*], potassium and ammonium nitrates and the law of Bravais, A., ii, 161.
isodimorphism, A., ii, 237, 380.
Walter, *Bernhard* [*Ludwig Johann Heinrich*], new radiation produced in atmospheric air by the rays from radiotellurium, A., ii, 567.
Walter, *Heinrich.* See *Rudolf* **Wegscheider.**
Walter, *Leonhard.* See *Emil* **Knoevenagel.**
Walther, *Reinhold* [*Freiherr*] *von,* and *R.* **Bamberg,** derivatives of *o*-amino-*m*-xylyl-*p*-toluidine, A., i, 298.
Warburg, *Emil* [*Gabriel*], ozonising of oxygen and atmospheric air by the discharge from metallic points, A., ii, 516.
Warburg, *Otto,* hydrolysis of leucine ethyl ester by the pancreatic ferment, A., i, 176.
Warburg, *Otto.* See also *Emil* **Fischer.**
Warcollier, *G.,* cause of the presence of abnormal amounts of starch in bruised apples, A., ii, 753.
Ward, *Henry A.,* the Billings meteoric iron, A., ii, 263.
Warin, *Jules,* estimation of the active principles of alder bark, A., ii, 363.
estimation of the active principles of alder bark and *Cascara sagrada* and their extracts, A., ii, 659.
Warschawsky, *J.,* respiration and fermentation of the different varieties of dead yeast, A., ii, 342.
Wartenberg, *H. von.* See *Theophile* **Fischer** and *Walther* **Nernst.**
Watson, *Chalmers,* influence of meat diet on the thyroid and parathyroids, A., ii, 271.
Watson, *Edwin Roy,* silver dioxide and silver peroxynitrate, P., 297.
Watteville, *Charles de,* flame spectra, A., ii, 2.
Watts, *Francis,* and *Harold A.* **Tempany,** the inversion of cane sugar in the presence of milk constituents, A., ii, 425.
polarimetric determination of sucrose, A., ii, 656.
Weaver, *J. T.* See *Clifford D.* **Holley.**
Weber, *Carl Otto,* coagulation and solubility of caoutchouc, A., i, 363.
Weber, *Frederick Parkes,* a case of leucæmia, A., ii, 48.
Weber, *Otto.* See *Eberhard* **Rimbach.**
Webster, *Charles Stuart Stanford,* luminescope for comparing substances under the influence of radium rays, A., ii, 71.
triboluminescence, A., ii, 786.
Wedekind, *Edgar* [*Léon Waldemar Otto*], introduction of nitrogen into the santonin molecule, and the physiological behaviour of certain santonin derivatives, A., i, 134.

Wedekind, *Edgar* [*Léon Waldemar Otto*], action of allyl iodide on tetrahydroquinoline, A., i, 234.
asymmetric nitrogen. XIX., A., i, 520.
the reduction of zirconium oxide and the spontaneous formation of zirconium nitride, A., ii, 596.
Wedekind, *Edgar*, [and *K.* **Fetzer**], preparation and properties of manganese boride, A., ii, 322.
reduction of thorium oxide by boron and silicon, A., ii, 718.
Wedekind, *Edgar*, and *Emanuel* **Fröhlich**, resolution of phenylbenzylmethylpropylammonium bases into their optical antipodes, A., i, 878.
Wedekind, *Edgar*, and *Anton* **Koch**, the oxonium nature of santonin, A., i, 211.
the behaviour of halogens towards santonin, A., i, 212.
isoartemisin (δ-hydroxysantonin), A., i, 529.
Wedemann, *Wilhelm*. See *Eduard* **Buchner**.
Weedon, *William Stone*, and *Howard Waters* **Doughty**, diphenylsulphone-*o*-carboxylic acid and related compounds, A., i, 345.
Weehuizen, *F.*, phenolphthalin as reagent for hydrogen cyanide, A., ii, 489.
Wegscheider, *Rudolf* [*Franz Johann*], heats of solution and of dilution, A., ii, 505.
phase rule, A., ii, 508.
Wegscheider, *Rudolf*, and *Erich* **Bondi**, esterification of unsymmetrical di- and poly-basic acids. XIII. Ester-acids of 4-substituted phthalic acids, A., i, 895.
Wegscheider, *Rudolf*, and *Heinrich* **Walter**, specific gravities of sodium carbonate and sodium hydroxide solutions, A., ii, 521.
Weidenkaff, *Erich*. See *Carl* **Paal**.
Weidmann, *William O.* See *John Charles* **Olsen**.
Weigert, *Fritz*. See *Robert* **Luther**.
Weigert, *Richard*. See *Franz* **Steinitz**.
Weik, isoform, a new antiseptic, A., ii, 847.
Weil, *Albert Otto*. See *Roland* **Scholl**.
Weil, *Hugo*, elementary analysis by Dennstedt's method, A., ii, 202.
Weil, *Hugo*. See also *Karl* **Dürrschnabel**, *Rudolf* **Lambrecht**, and *Herbert* **Teichner**.
Weiler-Ter-Meer. See **Chemische Fabrik vorm. Weiler-Ter-Meer**.
Weilinger, *Carl*. See *Eduard* **Vongerichten**.
Weinland, *Ernst*, invertin in blood, A., ii, 730.
metabolic changes during the metamorphosis of the meat-fly (*Calliphora vomitoria*), A., ii, 734.
excretion of ammonia by the larvæ of Calliphora, A., ii, 740.
Weinland, *Rudolf Friedrich*, and *Wilhelm* **Knöll**, chlorinated and brominated molybdates, brominated molybdites and their corresponding acids, A., ii, 323.
Weinland, *Rudolf Friedrich*, and *Hermann* **Lewkowitz**, hydrofluorides of some anilides and substituted anilines, A., i, 518.
Weinland, *Rudolf Friedrich*, and *Hans* **Schmid**, halogen double salts of quadrivalent antimony, A., ii, 258.
chlorinated antimonates; metachloroantimonic acid, A., ii, 326.
Weinland, *Rudolf Friedrich*, and *Karl* **Schmid**, a simple method for the formation and preparation of alkyl haloids, A., i, 557, 850.
Weinschenk, *Arthur*, reaction of aromatic azo-compounds with aromatic amines differing from the induline synthesis, A., i, 724.
Weis, *Edmund*, the condensation product of formylisobutyraldol with acetaldehyde, A., i, 17.
Weiser, *Stephan*. See *Franz* **Tangl**.
Weisl, *Siegmund*, *p*-hydroxydeoxybenzoin, A., i, 904.
Weiss, *L.*, and *O.* **Aichel**, reduction of metallic oxides by means of the cerite metals, A., ii, 164.
Weissheimer, *Paul*. See *Daniel* **Vorländer**.
Weizmann, *Charles*, and *Ernest Basil* **Falkner**, ethyl β-naphthoylacetate, P., 307.
Weizmann, *Charles*. See also *Jan Quiller* **Orchardson**.
Welde, *Robert*. See *Georg* **Merling**.
Wells, *Harry Gideon*, the transport of iodised fat in phosphorus poisoning, A., ii, 745.
Wells, *Robert J.* See *John B.* **Ekeley**.
Wells, *Roger Clark*. See *Theodore William* **Richards**.
Wendt, *Georg von*, metabolism (albuminous and saline) in man, A., ii, 840.
Wentzki, *O.*, estimation of urea, A., ii, 214.
new method for the estimation of mixtures of chlorides, iodides, and bromides, A., ii, 478.
Wenzel, *Friedrich*. See *Eduard* **Pflüger**.
Werner, *Alfred*, construction of the periodic system, A., ii, 308, 514.

Werner, *Alfred*, and *Ernst* **Berl**, hexahydroxylaminecobalt salts, A., ii, 323.

Werner, *Alfred*, and *Theodor* **Detscheff**, Beckmann's rearrangement in oximes of ketone-alcohols of the benzoin type, A., i, 225.

Werner, *Alfred*, and *Rudolf* **Feenstra**, saturated series of dicobaltammine compounds, A., ii, 323.

Werner, *Alfred*, and *Adolf* **Grün**, triamminecobalt salts; a new case of hydrate isomerism, A., ii, 93.

Werner, *Alfred*, and *Alfred* **Piguet**, Beckmann's rearrangement by means of benzenesulphonic chloride in the presence of alkali or pyridine, A., i, 66.

Werner, *Alfred*, and *Adam Alexander* **Wolberg**, dibromotetra-amminecobalt salts, A., ii, 322.

bromoaquotetra-amminecobalt salts, A., ii, 528.

West, *Augustus P.* See *Harry Clary* **Jones**.

West, *George H.* See *Edgar Fahs* **Smith**.

West, *Rodney.* See *George Bell* **Frankforter**.

Westdeutsche Thomasphosphat-Werke, G.M.B.H., synthetical preparation of ammonia, A., ii, 314.

Westhausser, *F.*, estimation of phosphoric acid in Thomas slag, A., ii, 419.

Westhaver, *J. B.*, behaviour of anodes of iridium, platinum, and rhodium in the electrolysis of dilute sulphuric acid, A., ii, 226.

Weston, *Robert Spurr*, [colorimetric] estimation of nitrogen as nitrites in waters, A., ii, 352.

Wetzel, *H.* See *Ivan* **Koppel**.

Weyberg, *Z.*, basic alumino-silicates containing haloids, A., ii, 89.

the sodalite series, A., ii, 98.

action of barium and strontium chlorides on kaolin at high temperatures, A., ii, 262.

Weyrich, *E.*, suprarenine [epinephrine], the substance of the suprarenal glands which causes increase of the pressure of the blood, A., i, 152.

Wheeler, *Alwin Sawyer*, estimation of methoxyl groups in some lignocelluloses, A., i, 574.

Wheeler, *Charles Edwin.* See *Harold* **Meakin**.

Wheeler, *Henry Lord*, and *Howard Stanley* **Bristol**, pyrimidines: action of potassium thiocyanate on certain imide chlorides. IX., A., i, 483.

Wheeler, *Henry Lord*, and *Howard Stanley* **Bristol**, [with *Samuel Hopkins* **Clapp** and *Treat Baldwin* **Johnson**], pyrimidines. VIII. Structure of certain derivatives, A., i, 482.

Wheeler, *Henry Lord*, and *George Samuel* **Jamieson**, synthesis of iodogorgonic acid, A., i, 350.

Wheeler, *Henry Lord*, and *Johannes G.* **Statiropoulos**, some urazole and iminothiodiazoline derivatives, A., i, 720.

Wheeler, *Homer Jay*, *Burt Laws* **Hartwell**, and *G. E.* **Adams**, function of the sodium when used in sodium nitrate, A., ii, 650.

Whitcomb, *William H.* See *Arthur Amos* **Noyes**.

White, *Alfred Holmes*, and *Edward De-Mille* **Campbell**, improvements in gas analysis apparatus, A., ii, 607.

White, *Alfred Holmes*, and *Wm.* **Melville**, decomposition of ammonia at high temperatures, A., ii, 384.

White, *Edmund*, tragacanth and acacia; comparative viscosity of the simple and mixed mucilages, A., i, 685.

Wichelhaus, [*Karl*] *Hermann*, action of phosphorus on organic compounds. II., A., i, 432.

Widmer, *Albert.* See *Stanislaus von* **Kostanecki**.

Widnmann, *Eduard.* See *Andreas* **Lipp**.

Wiechowski, *Siegfried*, condensation of naphthalaldehydic acid with *m*-tolyl methyl ketone, pinacolin, and acenaphthenone, A., i, 707.

Wiechowski, *Wilhelm*, contractility of intracranial vessels, A., ii, 401.

hippuric acid synthesis, A., ii, 846.

Wiegner, *G.* See *Heinrich* **Ley**.

Wieland, *Heinrich*, cyanogen bromide and hydroxylamine. II., A., i, 420.

Wieland, *Heinrich*, and *Siegfried* **Bloch**, ψ-nitrosites of unsaturated ketones, A., i, 706.

Wielen, *P. van der*, peppermint oil from Java, A., i, 223.

Wiggers, *Carl J.*, action of adrenaline on cerebral vessels, A., ii, 846.

Wigham, *Joseph Theodore.* See *Henry H* **Dixon**.

Wilde, *P. de*, gold in sea water, A., ii, 532.

Wilderman, *Meyer*, galvanic cells produced by the action of light, A., ii, 499.

Wilke, *Ernst.* See *Georg* **Bredig**.

Wilke-Dörfurt, *Ernst.* See *Wilhelm* **Biltz**.

Will, *Hermann*, and *F.* **Schöllhorn**, production of hydrogen sulphide by yeast, A., ii, 547.

Willcox, *O. W.*, reactions of ethyl chlorosulphonate, A., i, 45.

Willcox, *William Henry*, examination of gastric contents, A., ii, 837.

Willgerodt, [*Heinrich*] *Conrad* [*Christoph*], and *Hans* **Bogel**, di-*p*-benzaldehydeiodonium hydroxide and its derivatives, A., i, 901.

p-iodobenzaldehyde, *p*-iodobenzophenone, and derivatives of the latter containing polyvalent iodine, A., i, 901.

Willgerodt, *Conrad*, [and, in part, *Paul* **Frischmuth**], derivatives of iodoquinolines with multivalent iodine, A., i, 547.

Willgerodt, *Conrad*, [with *Paul* **Frischmuth**, *Albert* **Landenberger**, and *Reinhold* **Thiele**], derivatives of *p*-dichloro-, *p*-dibromo-, and *v*-*m*-dibromo-iodobenzenes with polyvalent iodine, A., i, 580.

Willgerodt, *Conrad*, and *Hans* **Harter**, *p*-ethylphenylhydrazine, and picryl- and *op*-dinitrophenyl-*p*-ethylphenylhydrazines and their derivatives, A., i, 551.

Willgerodt, *Conrad*, and *Franz* **Herzog**, picryl-, *op*-dinitrophenyl-, and 5-chloro-2-nitrophenyl-2:4:5-trimethylphenylhydrazines and their derivatives, A., i, 549.

Willgerodt, *Conrad*, and *Willy* **Lindenberg**, *p*-xylylhydrazine, and picryl-, *op*-dinitrophenyl-, and 5-chloro-2-nitrophenyl-*p*-xylylhydrazines, A., i, 550.

Willgerodt, *Conrad*, and *Reinhold* **Rieke**, derivatives of the iodobenzaldehydes containing uni- and ter-valent iodine, A., i, 442.

Willgerodt, *Conrad*, and *Friedrich* **Schmierer**, iodoso-, iodoxy-, and iodonium compounds from *s*-iodo-xylene, A., i, 425.

Williams, *R. H.*, methods for estimating formaldehyde, A., ii, 488.

Williams, *Walter Scott*, valuation of tannic acid, A., ii, 772.

Williamson, *Alexander William*, obituary notice of, T., 605.

Willson, *Howard Samuel*, isolation of *Bacillus typhosus* from infected water, A., ii, 748.

Willstätter, *Richard*, and *Ludwig* **Kalb**, quinonoid derivatives of diphenyl II., A., i, 361.

Willstätter, *Richard*, and *Wilhelm* **Marx**, oxidation of sparteine, A., i, 544.

Willstätter, *Richard*, and *Adolf* **Pfannenstiel**, quinoneimines. III., A., i, 69.

Willstätter, *Richard*, and *Adolf* **Pfannenstiel**, *o*-benzoquinone, A., i, 144.

quinonedimethylimine (quinonoid compounds. IV.), A., i, 669.

oxidation of *o*-phenylenediamine, A., i, 723.

Willstätter, *Richard*, and *Rudolf* **Pummerer**, pyrone. II., A., i, 457.

Willstätter, *Richard*, and *Wolfgang von* **Schmaedel**, derivatives of cyclobutane, A., i, 514.

Willstätter, *Richard*, and *Hans* **Veraguth**, cyclo-octenes, A., i, 515.

some derivatives of ψ-pelletierine, A., i, 543.

Wilson, *Ernest*, alternate current electrolysis, A., ii, 673.

Wilson, *John*. See *John Ernest* **Mason**.

Wilson, *T. M.*, clinical measurement of electrical conductivity, A., ii, 263.

Windaus, *Adolf*, cholesterol. IV., A., i, 128.

formation of saccharins from hexoses, A., i, 510.

Windaus, *Adolf*, and *Franz* **Knoop**, transformation of dextrose into methyliminazole, A., i, 381.

Windaus, *Adolf*. See also *Franz* **Knoop**.

Windisch, *Karl*, estimation of boric acid, A., ii, 554.

Windisch, *Karl*, and *Theodor* **Roettgen**, estimation of the volatile acids in wine, A., ii, 212, 361.

Windisch, *Wilhelm*, and *H.* **Boden**, influence of calcium sulphate on the decomposition of starch and albumin in the mashing process, A., ii, 188.

Winkelmann, *Adolf* [*August*], influence of temperature and pressure on the absorption and diffusion of hydrogen in palladium, A., ii, 397.

diffusion of nascent hydrogen through iron, A., ii, 682.

Winkler, *Ludwig Wilhelm*, preparation of pure ethyl alcohol, A., i, 850.

Winokurow, *Eugen*. See *Carl Adam* **Bischoff**.

Winteler, *F.*, assay of high-grade nitric acid, A., ii, 553.

Winter, *Heinrich*, yellow and red arsenic trisulphide, A., ii, 245.

Winter, *William Phillips*, sodamide and certain of its reaction products, A., ii, 30.

Winterberg, *Heinrich*. See *C. J.* **Rothberger**.

Winternitz, *Milton Charles*. See *Walter* **Jones**.

Winterstein, *Ernst* [*Heinrich*], isolation of lysine, A., i, 726.

proteids obtained from Ricinus seeds, A., i, 727.

Winterstein, *Ernst*, and *Enrico* **Pantanelli**, amino-acid obtained by the hydrolysis of the proteids of lupin seeds, A., i, 687.
Winterstein, *Ernst*. See also *Ernst* **Schulze**.
Winther, *Chr.*, rotation of optically active substances, A., ii, 493.
Winton, *A. L.*, and *E. Monroe* **Bailey**, estimation of vanillin, coumarin, and acetanilide in vanilla extract, A., ii, 620.
Wintrebert, *L.*, some osminitrites and an osmium nitrite, A., ii, 261.
Wirthwein, *Heinz*. See *Arthur* **Stähler**.
Wislicenus, *Hans*, analysis of tannin materials with exfoliated alumina, A., ii, 363.
Wislicenus, *Johannes*, memorial lecture on (PERKIN), T., 501; P., 17.
Wislicenus, *Wilhelm*, intramolecular migration of acyl groups, A., i, 170.
Wislicenus, *Wilhelm*, and *Henry* **Wren**, syntheses of arylnitromethanes and of stilbene derivatives, A., i, 284.
Wislicenus, *Wilhelm*. See also *Otto* **Dimroth**.
Wislocki, *Waslaw*. See *Herman* **Decker**.
Wissell, *Ludwig von*, analysis of curdled milk, A., ii, 774.
Withers, *W. A.*, and *George Stronach* **Fraps**, nitrification of different fertilisers, A., ii, 110.
nitrification of ammonia fixed by chabazite, A., ii, 111.
nitrifying power of typical North Carolina soils, A., ii, 111.
Witte, *Kurt*. See *Joh.* **Howitz**.
Wittenberg, *Fritz*. See *Emil* **Erlenmeyer,** *jun.*
Wittmann, *Johann*, solanin, A., i, 456.
Wodzinsky, *Gabriel von*. See *Carl Adam* **Bischoff**.
Wöhler, *Lothar*, molecular weight of fulminic acid, A., i, 419.
Wöhler, *Lothar*, and *James* **König**, the oxides of palladium, A., ii, 722.
Wöhler, *Lothar*, and *K.* **Theodorovits**, the formation of mercury fulminate, A., i, 418.
Wöhler, *Paul*, preparation of metallic calcium in the laboratory, A., ii, 708.
Wöhlk, *Alfred*, new reaction for lactose (and maltose), A., ii, 122.
Wölfl, *Valentin*. See *Karl A.* **Hofmann**.
Wohlers, *Hans Emil*. See *Ernst Hermann* **Riesenfeld**.
Wohlgemuth, *Julius*, hydrolysis of the liver proteid, A., i, 103.
nucleo-proteid of the liver. IV., A., i, 620.
the source of substances containing sulphur in animals, A., ii, 182.
the urine in phosphorus poisoning, A., ii, 338, 470.
localisation of ferments in the hen's egg, A., ii, 541.
the behaviour of stereoisomerides in the animal organism. II. Inactive amino-acids, A., ii, 543.
Wohltmann, *Ferdinand*, action of sodium chloride on crops, A., ii, 759.
Wohltmann, *Ferdinand*, and *Ph.* **Schneider**, new apparatus for determining the ammonia-absorption power of soils, A., ii, 649.
Woinitsch-Sianoschensky, *S.* See *Michael I.* **Konowaloff**.
Wolberg, *Adam Alexander*. See *Alfred* **Werner**.
Wolbring, *Wilh.* See *Max* **Busch**.
Wolf, *Charles George Lewis*, effect on blood-pressure of proteolytic products, A., ii, 264.
Wolf, *Charles George Lewis*. See also *Letchworth* **Smith**.
Wolff, *Hermann*, salts of cerium, A., ii, 457.
Wolff, *Jules*, estimation of maltose or dextrose in presence of starch paste, A., ii, 487.
[approximate] estimation of reducing sugars and dextrins in presence of starch and soluble starch, A., ii, 558.
separation of starch coagulum and amylocellulose, A., ii, 866.
Wolff, *Jules*, and *Auguste* **Fernbach**, diastasic coagulation of starch, A., i, 312.
circumstances which influence the physical condition of starch, A., i, 510.
Wolff, *Jules*. See also *Auguste* **Fernbach**.
Wolff, *Ludwig*, azine of ethyl acetoacetate, A., i, 839.
Wolochowitsch, *L.* See *Michael M.* **Tichwinsky**.
Wolpert, *Heinrich*, combustible gaseous carbon compounds in the air, A., ii, 160.
Wood, *James*. See *Francis Robert* **Japp**.
Wood, *Robert Williams*, scintillations produced by radium, A., ii, 664.
fluorescence of sodium vapour and the resonance radiation of electrons, A., ii, 783.
Wootton, *William Ord*. See *Gilbert Thomas* **Morgan**.

Worden, *Edward C.*, and *John* **Motion**, preparation of volumetric solutions, A., ii, 280.
Worley, *Frederick P.*, bromine in solutions of potassium bromide, T., 1107; P., 209.
Wren, *Henry*. See *Wilhelm* **Wislicenus**.
Wright, *Ralph Garrigue*. See *Marston Taylor* **Bogert**.
Wrochem, *J. von*, apparatus for the determination of the specific gravity of solid substances in powder or in a granular form, A., ii, 506.
Würfel, *Walter*. See *Friedrich Wilhelm* **Küster**.
Würker, *Walter*. See *Theodor* **Zincke**.
Wulffius, *Hellmuth*. See *Carl Adam* **Bischoff**.
Wynne, *William Palmer*. See *James Stuart* **Hills**.

Y.

Yamano, *Y.*, can aluminium salts enhance plant growth? A., ii, 344.
Young, *George*, *C*-phenyl-*s*-triazole, T., 625; P., 131.
Young, *George*, and *Samuel Irwin* **Crookes**, contributions to the chemistry of the amidines. 2-Aminothiazoles and 2-imino-2:3-dihydrothiazoles; 2-iminotetrathiazoles and 2-amino-4:5-dihydrothiazoles, P., 307.
Young, *Stewart Woodford*, and *W. E.* **Burke**, composition and solubility of the hydrates of sodium thiosulphate, A., ii, 32.
Young, *Stewart Woodford*, and *J. Pearce* **Mitchell**, supercooled fusions and solutions of sodium thiosulphate, A., ii, 31.
Young, *Sydney*, boiling points of homologous compounds, A., ii, 231.
Young, *William John*. See *Arthur* **Harden**.

Z.

Zacharias, *P. D.*, theory of dyeing, A., i, 74, 293.
Zachoder, (*Mlle.*). See *H.* **Cantoni**.
Zahn, *Otto*. See *Albin* **Köhler**.
Zaitschek, *Arthur*. See *Franz* **Tangl**.
Zakrzewski, *C.* See *H.* **Kamerlingh Onnes**.
Zalackas, *C.*, antidote to nicotine, A., ii, 339.
Zaleski, *Jean*, compounds of mesoporphyrin with iron and manganese, A., i, 105.
Zaleski, *W.*, proteid formation in ripening seeds, A., ii, 549.
proteolytic enzyme of ripening seeds, A., ii, 549.
Zambonini, *Ferruccio*, crystallised slag from Hettstedt; composition of melilite, A., ii, 834.
Zanetti, *Joaquin E.* See *Gregory Paul* **Baxter**.
Zart, *A.* See *Max* **Conrad**.
Zecchini, *Filippo*, relation between electrolytic dissociation and refractive power, A., ii, 661.
Zellner, *Julius*, fly agaric (*Amanita muscaria*). II., A., ii, 550.
Zengelis, *Constantin*, detection and estimation of minute quantities of mercury, A., ii, 65.
vaporisation of solid substances at the ordinary temperature, A., ii, 143.
Zerban, *Fritz*, radioactivity of thorium, A., ii, 170.
Zerban, *Fritz*. See also *Charles* **Baskerville**.
Zernik, *F.*, stovaine, A., ii, 491.
Zielstorff, *Willy* [*Adalbert Karl*], action of calcium cyanamide, A., ii, 477.
Zienkowski, *Franz*. See *Stefan* **Moycho**.
Zincke, [*Ernst Carl*] *Theodor*, dinitrophenylpyridinium chloride and its transformation products. III., A., i, 467.
Zincke, *Theodor*, [with *Max* **Buff** and *Wilhelm* **Emmerich**], action of nitric acid on the halogen derivatives of *p*-alkylphenols. II. Action of nitric acid on the bromo-derivatives of *p*-cresol, A., i, 879.
Zincke, *Theodor*, [with *Ernst* **Ellenberger**, *Adolf* **Kuchenbecker**, *Philipp* **Malkomesius**, and *Anton* **Maué**], action of nitric acid on aminosulphonic acids; nitroamines, diazo-compounds, and indazoles, A., i, 486.
Zincke, *Theodor*, and *Gottfried* **Mühlhausen**, additive compounds of hydrogen bromide and aromatic carbonyl compounds, A., i, 289.
Zincke, *Theodor*, and *Siegmar* **Münch**, action of bromine and chlorine on phenols: substitution products, ψ-bromides and ψ-chlorides. XII. ψ-Bromo-*p*-dihydroxystilbene, stilbenequinone, and their products, A., i, 55.
Zincke, *Theodor*, and *Hans* **Reinbach**, action of nitric acid on tri- and tetra bromo-*p*-ethylphenols, A., i, 882.
Zincke, *Theodor*, and *Hans* **Wagner**, action of bromine and chlorine on phenols; substitution-products, ψ-bromides and ψ-chlorides; tetrachloro-*p*-dihydroxytolane A. i 342

Zincke, *Theodor*, and *Walter* **Würker**, action of secondary aromatic amines on dinitrophenylpyridinium chloride, A., i, 241.

dinitrophenylpyridinium chloride and its transformation products. IV. The action of aliphatic amines on dinitrophenylpyridinium chloride, A., i, 923.

Zinsser, *Adolf*, extent to which fats are decomposed in the stomach, A., ii, 732.

Zipser, *Arthur*. See *Rudolf* **Andreasch**.

Zlokasoff, *Marguerite*. See *Fritz* **Ullmann**.

Zöhls, *Arthur*. See *Fritz* (*Edler*) **Konek von Norwall**.

Zopf, *Wilhelm*, compounds from lichen, A., i, 212, 789.

Zoppellari, *Ivo*, relation of electrolytic dissociation to refractive power; non-electrolytes in solution, A., ii, 493.

Zortman, *Israel Hyman*. See *Julius Berend* **Cohen**.

Zrzawy, *Julius*, modified gas-burettes, A., ii, 55.

Zschimmer, *Eberhard*, physical properties of glass as functions of the chemical composition, A., ii, 709.

Zucchi, *S.*, iron in diabetic urine, A., ii, 469.

INDEX OF SUBJECTS.

TRANSACTIONS, PROCEEDINGS, AND ABSTRACTS.

1905.

(Marked T., P., and A., i and A., ii respectively.)

A.

Abies sibirica, oil of, crystalline products of (GOLUBEFF), A., i, 74.

Abietic acid, constitution of, and its monoacetyl derivative (ENDEMANN), A., i, 525.

Abrus precatorius, a substance which inhibits the fat-splitting action of the seed of (BRAUN), A., ii, 113.

Absorption from intra-muscular tissue (MELTZER and AUER), A., ii, 181.

of iron in dogs and cats (SATTLER), A., ii, 333.

Absorption spectrum. See under Photochemistry.

Acacatechin and its tetramethyl ether and their acetyl derivatives (PERKIN), T., 399; P., 89.

Acacia and tragacanth; comparative viscosity of the simple and mixed mucilages (WHITE), A., i, 685.

Acacia catechu, constituents of (PERKIN), T., 398; P., 89.

Acenaphthenone, condensation of, with naphthalaldehydic acid (WIECHOWSKI), A., i, 707.

Acet-. See also Aceto-, Acetyl-, and under the parent Substance.

Acetal, bromo- (FREUNDLER and LEDRU), A., i, 326.

Acetaldehyde, thermal decomposition of (BONE and SMITH), T., 910; P., 171.

and water, molecular refractions of mixtures of (HOMFRAY), T., 1434; P., 225.

condensation of, with formylisobutyraldol (WEIS), A., i, 17; (SCHACHNER), A., i, 171.

Acetaldehyde, action of, on mercuric acetate (LASSERRE), A., i, 740.

action of, on mercuric oxide (AULD and HANTZSCH), A., i, 743.

action of sodium sulphite on (SEYEWETZ and BARDIN), A., i, 683.

condensation of, with isovaleraldehyde (EHRENFREUND), A., i, 861.

compounds of, with chlorine (MCINTOSH), T., 791; P., 64, 120.

distinction between formaldehyde and (LEYS), A., ii, 655.

titration of (SEYEWETZ and BARDIN), A., ii, 771.

Paracetaldehyde, bromination of (FREUNDLER), A., i, 569.

Acetaldehyde-*p*-nitrophenylhydrazone (MEDVEDEFF), A., i, 491, 612.

Acetaldehydephenylhydrazone, solubility of (ROBERTSON), T., 1298; P., 181.

Acetamide, decomposition of salts in (BRUNI and MANUELLI), A., ii, 689.

Acetamidine, condensation of, with ethyl succinylsuccinate (BOGERT and DOX), A., i, 949.

Acetanilide, estimation of (PUCKNER), A., ii, 871.

*s-di*nitro-(FLÜRSCHEIM), A., i, 615.

Acetic acid and benzene, viscosity of (DUNSTAN), T., 15.

and its halogen derivatives, action of nitrogen sulphide on (FRANCIS), T., 1837; P., 258.

action of phenylcarbamide on (VALLÉE), A., i, 771.

estimation of, in white lead (THOMPSON), A., ii, 556.

Acetic acid, salts, detection of (BENEDICT), A., ii, 123.

Acetic acid, insoluble basic aluminium salt (REISS), A., i, 852.
bismuth and tin salts (COLONNA), A., i, 852.
mercuric salt, action of acetaldehyde and acetone on (LASSERRE), A., i, 740.
potassium salt, electrolysis of (HOFER and MOEST), A., i, 8.
Acetic acid, ethyl ester, influence of water and alcohol on the boiling point of (WADE), T., 1656; P., 240.
compounds of, with bromine and chlorine (MCINTOSH), T., 791; P., 64, 120.
Acetic acid, amino-. See Glycine.
bromo-, *l*-menthyl ester, and its interaction with methyl and ethyl sulphides and methyl ethyl sulphide (SMILES), T., 454; P., 92.
halogen derivatives, action of nitrogen sulphide on (FRANCIS), T., 1838; P., 258.
bromo-, chloro-, and iodo-derivatives, esters, velocity constants of the reaction between sodium thiosulphate and (SLATOR), T., 481; P., 121.
chloro-derivatives, ethyl esters, action of, on aniline magnesium haloid compounds (BODROUX), A., i, 585.
action of phenylcarbamide on (VALLÉE), A., i, 771.
estimation and separation of (POOL), A., ii, 425.
chloro-, ethyl ester, action of, on ethyl sodiomalonates and on ethyl sodioacetoacetates (MICHAEL), A., i, 855.
*tri*chloro-, compounds of, with dimethylpyrone (PLOTNIKOFF), A., i, 77.
cyano-, esters, action of methyl and ethyl chloro-oxalates on (TRIMBACH), A., i, 323.
alkyl esters, constitution of (HALLER and MULLER), A., i, 112.
ethyl ester, formation of *C*-acyl derivatives of, by means of pyridine and quinoline (MICHAEL and ECKSTEIN), A., i, 176.
thio-, *p*-methoxy- and *p*-ethoxyphenyl esters (TABOURY), A., i, 644.
Acetic acids, negatively-substituted, condensation of, with fatty aldehydes (KNOEVENAGEL), A., i, 169.
Acetic anhydride, action of nitrogen sulphide on (FRANCIS), T., 1837; P., 258.
mono- and *di*-chloro-, preparation of (PATTERSON), A., i, 168.
Acetin, *αα-di*bromo- and *αα-* and *αβ-di*chloro- (ACEÑA), A., i, 7.
Aceto-. See also Acet-, Acetyl-, and under the parent Substance.
Acetoacetic acid, sodium salt, and the formation of analogous salts (BRÜHL and SCHROEDER), A., i, 170.
Acetoacetic acid, benzyl ester, and its copper derivative (BACON), A., i, 204.
ethyl ester, mechanism of the synthesis of (CLAISEN), A., i, 258.
proof of the ketonic structure of (BRÜHL and SCHRÖDER), P., 164.
condensation of, with phenylmethylpyrazolone (STOLLÉ), A., i, 838.
sodium derivative, history of the theory of the formation and constitution of (CLAISEN), A., i, 258; (MICHAEL), A., i, 506.
sodium derivative, action of, on dibromo-hydrocarbons (SOLONINA), A., i, 112.
sodium derivative, action of ethyl chloroacetate (MICHAEL), A., i, 856.
sodium derivative, action of phenylpropiolyl chloride on (RUHEMANN and MERRIMAN), T., 1393; P., 225.
sodium derivative, syntheses with (MICHAEL), A., i, 564.
Acetoacetic acid, nitroso-, ethyl ester, preparation of (BOUVEAULT and WAHL), A., i, 506.
*iso*nitroso-, ethyl ester, action of hydroxylamine on (BOUVEAULT and WAHL), A., i, 257; (HANTZSCH), A., i, 408.
Acetol. See Acetylcarbinol.
Acetone, molecular refractions of mixtures of water and (HOMFRAY), T., 1437; P., 226.
action of light on a mixture of, with hydrogen cyanide (CIAMICIAN and SILBER), A., i, 414.
equilibrium between hydroxylamine hydrochloride and (LANDRIEU), A., ii, 445.
mechanism of the chlorination of, when mixed with water in presence of marble (KLING), A., i, 327.
oxidation of (PASTUREAU), A., i, 572.
action of magnesium amalgam on (COUTURIER and MEUNIER), A., i, 326.
action of, on mercuric acetate (LASSERRE), A., i, 740.
action of, on mercuric oxide (AULD and HANTZSCH), A., i, 742.
action of potassium hydroxide on a mixture of, with phenylacetylene (SKOSSAREWSKY), A., i, 774.

Acetone, condensation of, with pyrogallol (FABINYI and SZEKI), A., i, 888.
electrolysis in (LEVI and VOGHERA), A., i, 572.
formation of, in the body (MAIGNON; SATTA), A., ii, 406; (WALDVOGEL), A., ii, 735.
compounds of, with bromine and chlorine (MCINTOSH), T., 790; P., 64, 120.
compound of, with mercury cyanide (MARSH and STRUTHERS), T., 1878; P., 248.
compounds of, with nitric, sulphuric, and chlorosulphonic acids (MCINTOSH), A., i, 677.
source of error in the estimation of, by the iodoform process (VAUBEL and SCHEUER), A., ii, 291; (KEPPELER), A., ii, 360.
Acetone, amino-, condensation of, with benzaldehyde (ALEXANDER), A., i, 92.
action of hydrogen cyanide on (GABRIEL), A., i, 265.
*tri*chloro-, isomeride of (PERRIER and PROST), A., i, 171.
Acetonedicarboxylic acid, ethyl ester, condensation of, with benzylideneaniline (MAYER), A., i, 429.
Acetonitrile, *mono-* and *di*-bromo- (STEINKOPF), A., i, 756.
nitro-, attempts to synthesise (STEINKOPF), A., i, 122.
Acetonitrile poisoning. See under Poisoning.
Acetonyldimethylsulphine chloride (SMILES), P., 93.
Acetophenone, action of ammonium sulphide on (MANCHOT and KRISCHE), A., i, 142.
action of formamide on (REICH), A., i, 35.
action of potassium hydroxide on a mixture of, with phenylacetylene (BERTRONDD), A., i, 775.
compound of, with mercury cyanide (MARSH and STRUTHERS), T., 1878; P., 248.
Acetophenone, *p*-amino-, pharmacology of some condensation products of, with aldehydes (HILDEBRANDT), A., ii, 743.
m- and *p*-hydroxy-, and their methyl ethers (EIJKMAN, BERGEMA, and HENRARD), A., i, 360.
*iso*nitroso-, decomposition of the sodium derivative of (SLUITER), A., i, 791.
Acetophenoneanil (BUSCH and RINCK), A., i, 519.
Aceto-*o*-toluidide, *di-* and *tri*-chloro- and iodo- (BODROUX), A., i, 643.
Acetotoluidides, 2- and 3-, iodo-derivatives of (ARTMANN), A., i, 878.
Acetoxy-. See also under the parent Substance.
***o*-Acetoxybenzaldehyde** diacetate and 3-bromo- (HEINTSCHEL), A., i, 810.
α-Acetoxydihydro*iso*safrole, bromo-derivatives (HOERING), A., i, 903.
β-bromonitro- (HOERING), A., i, 902.
3-Acetoxy-2-phenyl-4:5-diphenylenefuran (JAPP and WOOD), T., 712.
α-Acetoxypropionic acid (*acetyl-lactic acid*) (AUGER), A., i, 320.
Acetoxypropionitrile (*acetyl-lactonitrile*) (ANSCHÜTZ), A., i, 267.
α-Acetoxypropylbenzene, β-bromo- (HOERING), A., i, 903.
γ-Acetoxypropylphthaliminomalonic acid, ethyl ester (SÖRENSEN), A., i, 749.
2′-Acetoxy-3:4:4′-trimethoxychalkone and its dibromide (BLOM and TAMBOR), A., i, 916.
Acetyl-. See also Acet-, and under the parent Substance.
Acetyl hydrogen peroxide, preparation of (PARKE, DAVIS & CO.), A., i, 317.
thiocyanate, tautomerism of (DIXON and HAWTHORNE), T., 468; P., 121.
influence of temperature on the interaction of, with bases (DORAN and DIXON), T., 331; P., 77.
Acetylacetone, action of methyl and ethyl chloro-oxalates on (TRIMBACH), A., i, 565.
condensation of, with methylpyrazolone (WOLFF), A., i, 840.
sodium derivative, action of phenylpropiolyl chloride on (RUHEMANN and MERRIMAN), T., 1390; P., 224.
Acetylacetonyloxalic acid, methyl ester (TRIMBACH), A., i, 565.
Acetylanthranil, physical constants of (SCHMIDT), A., i, 213.
4-nitro-, preparation of, and condensation of, with primary amines (BOGERT and STEINER), A., i, 945.
6-nitro-, and its reactions (BOGERT and CHAMBERS), A., i, 612.
preparation of, and condensation of, with primary amines (BOGERT and CHAMBERS), A., i, 612; (BOGERT and SEIL), A., i, 945.
***N*-Acetylanthranilic acid**, ω-chloro- (v. PAWLEWSKI), A., i, 437.
*di*chloro-, and its salts, ethyl ester, and lactone (GÄRTNER), A., i, 130.
4-nitro-, synthesis of 7-nitro-4-keto-2-alkyldihydroquinazolines from (BOGERT and STEINER), A., i, 945.

Acetylanthranilimine, *di*chloro-. See 3-Keto-2-*di*chloromethyldihydroquinazoline.

Acetylation in aqueous solutions (A. and L. LUMIÈRE and BARBIER), A., i, 642.

rôle of sulphuric acid in, with acetic anhydride (STILLICH), A., i, 318.

Acetylbenzylmalonanilic acid, ethyl ester (DIECKMANN, HOPPE, and STEIN), A., i, 136.

γ-Acetylbutyric acid and its hydrate (KAY and PERKIN), T., 1074.

Acetylcamphor, new formation of, and its imine (FORSTER and JUDD), T., 368; P., 116.

Acetylcarbinol (*acetol*), preparation and reactions of (NEF), A., i, 5; (PASTUREAU), A., i, 572.

oxidation of (KLING), A., i, 3.

aqueous solutions of (KLING), A., i, 625.

action of alkalis on aqueous solutions of (KLING), A., i, 503.

hydrates of (KLING), A., i, 402.

esters of (KLING), A., i, 732.

acetate of, and its oxime and semicarbazone (NEF), A., i, 6.

p-bromo- and *p*-nitro-phenylhydrazones of, and their acetyl derivatives (PALAZZO and CALDARELLA), A., i, 937.

Acetylcarbinolsemicarbazone (*acetolsemicarbazone*) (NEF), A., i, 4.

Acetylcatechol, amino- (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 127.

and its hydrochloride (STOLZ and MEYER), A., i, 106.

reduction of (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 436.

Acetylcelluloses (HAEUSSERMANN), A., i, 574.

Acetylcitric acid, *s*-dimethyl ester and its amide and nitrile, and monomethyl ester, and its anhydride (SCHROETER and SCHMITZ), A., i, 738.

Acetylcotarnine and its oxime (AHLERS), A., i, 786.

***s*-Acetyl-ψ-cumylhydrazide** (WILLGERODT and HERZOG), A., i, 550.

Acetyldextrin, *di*chloro- (KLDIASCHWILI), A., i, 634.

Acetyldiketo-. See Diketoacetyl-.

Acetylene, combustion of (BONE and ANDREW), T., 1232; P., 220.

some reactions of (NIEUWLAND), A., i, 557.

action of, on aqueous and hydrochloric acid solutions of mercuric chloride (BRAME), T., 427; P., 119.

Acetylene, action of, on solutions of mercuric chloride (BILTZ and MUMM), A., i, 2; (HOFMANN), A., i, 2, 268; (BILTZ), A., i, 165.

*tetra*chloride, preparation of (CONSORTIUM FÜR ELEKTROCHEMISCHE INDUSTRIE), A., i, 110.

Acetylene, *di*iodo-, preparation of (BILTZ and KÜPPERS), A., i, 1.

γ-Acetyl-α-ethylbutyric acid, and its semicarbazone (BLAISE and LUTTRINGER), A., i, 627.

γ-Acetyl-α-ethylglutaric acid, ethyl ester (BLAISE and LUTTRINGER), A., i, 627.

Acetyl groups, estimation of (PERKIN), T., 107; (SUDBOROUGH and THOMAS), T., 1752; P., 88.

Acetylhexoyloximes (LOCQUIN), A., i, 19.

Acetylhydrazide, *di*cyano-, and its aminoxime (RINMAN), A., i, 389.

Acetylhydrocotarnineacetic acid dibromide and its methyl ester and dihydro-derivative (AHLERS), A., i, 786.

2-Acetylindanedione, formation of (BÜLOW and DESENISS), A., i, 42.

Acetylketo-. See Ketoacetyl-

Acetyl-lactic acid. See α-Acetoxypropionic acid.

Acetylmalonic acid, ethyl ester, action of hydroxylamine on (PALAZZO and SALVO), A., i, 858.

Acetylmethylcarbinol and its semicarbazone (KLING), A., i, 504.

presence of, in certain vinegars (PASTUREAU), A., i, 559.

3-Acetyl-1-methylpiperidine and its oxime, phenylhydrazone, and semicarbazone and their hydrochlorides (LIPP and WIDNMANN), A., i, 662.

Acetyl*iso*nitrosoacetoacetic acid, ethyl ester (WAHL), A., i, 408.

Acetylnonoyl (LOCQUIN), A., i, 21.

Acetylnonoyl-oximes and **-semicarbazones** (LOCQUIN), A., i, 20.

α-Acetyloximino-β-phenylhydrazinobutyric acid, ethyl ester (WAHL), A., i. 408.

***p*-Acetylphenoxyacetic acid**, ω-chloro-, and its salts and ethyl ester (KUNCKELL), A., i, 646.

3-Acetyl-1-phenyl-4-methyl-$\Delta^{1,3}$-*cyclo*butadiene-2-carboxylic acid (RUHEMANN and MERRIMAN), T., 1391; P., 225.

5(or 3)-Acetyl-4-phenylpyrazoline and its oxime (AZZARELLO), A., i, 941.

Acetylsalicylphenetidide (ANSCHÜTZ), A., i, 267.

Acetyltrimethylitamalic anhydride (NOYES), A., i, 322.

Acetyl-*p*-xylylhydrazide (WILLGERODT and LINDENBERG), A., i, 551.

Achillea nobilis, essential oil of (ECHTERMEIER), A., i, 535.

Achras Sapota, chicle gum from (TSCHIRCH and SCHERESCHEWSKI), A., i, 685.

Acid, $C_7H_{10}O_6$, from gynocardinic acid (POWER and LEES), T., 351; P., 89.

$C_7H_{12}O_3$, and its phenylurethane and acetyl derivative, from the lactone from $\alpha\alpha\beta$-trimethyl-$\beta\gamma$-dibromobutyric acid (BLAISE and COURTOT), A., i, 563.

$C_9H_8O_8$, from the condensation of ethyl dibromomethylcyclopropanedicarboxylate with ethyl sodiomalonate (JONES), T., 1065; P., 216.

$C_9H_{14}O_6$, ethyl ester, from ethyl sodiopropylmalonate and ethyl α-bromopropionate (TSCHUGAEFF and SCHLOESINGER), A., i, 231.

$C_9H_{16}O_3$, from the oxide, $C_{10}H_{20}O$, from propionepinacone (KOHN), A., i, 167.

$C_{10}H_6O_4$, from the hydrolysis of ethyl coumarinketoacetate (KNOEVENAGEL and LANGENSIEPEN), A., i, 64.

$C_{10}H_{10}O_3$, and its salts and esters, from ethyl 1-methylcyclohexenylidene-3-cyanoacetate (KNOEVENAGEL and MOTTEK), A., i, 62.

$C_{10}H_{14}O_3$, and its isomeride, from camphene glycol (MOYCHO and ZIENKOWSKI), A., i, 711.

$C_{10}H_{16}O_2$, and its dibromide, from ginger grass oil (WALBAUM and HÜTHIG), A., i, 603.

$C_{11}H_{12}O_3$, and its salts, from ethyl 1:5-dimethylcyclohexenylidene-3-cyanoacetate (KNOEVENAGEL and MOTTEK), A., i, 62.

$C_{11}H_{11}O_3N_3,H_2O$, from methyl 5-ethoxyphenyl-1:2:3-triazole-4-carboxylate (DIMROTH and EBERHARDT), A., i, 99.

$C_{12}H_{22}O_5$, from the oxidation of octaglycol isobutyrate (LESCH and MICHEL), A., i, 403.

$C_{12}H_9O_4N$, from the condensation of pyruvic acid with hippuric acid (ERLENMEYER and ARBENZ), A., i, 241.

$C_{12}H_{13}O_4N$, from the oxazole, $C_{12}H_{11}O_3N$ (ERLENMEYER and BADE), A., i, 131.

$C_{12}H_{23}O_{10}N_5$, and its salts, from the hydrolysis of gelatin (SKRAUP), A., i, 398.

$C_{16}H_{24}O_3$, and $C_{16}H_{24}O_4$, and their salts, from the oxidation of abietic acid (ENDEMANN), A., i, 526.

Acid, $C_{16}H_8O_3N_4Cl_4$, from 2:5-dichlorophenylhydrazine (NOELTING and KOPP), A., i, 872.

$C_{17}H_{14}O_3$, and its esters and silver salt, from the oxidation of dimethylcyclopentanone (VORLÄNDER and SIEBERT), A., i, 793.

$C_{18}H_{13}O_2N$, ethyl ester, from ethyl α-cyanocinnamate and magnesium phenylacetylene bromide (KOHLER and REIMER), A., i, 348.

$C_{18}H_{18}O_5N$, acetyl derivative and sodium salt, from *o*-methoxybenzaldehyde and glycine (ERLENMEYER and BADE), A., i, 131.

$C_{22}H_{16}O_7$, and its salts, from tri-*p*-tolylcarbinol (TOUSLEY and GOMBERG), A., i, 44.

$C_{26}H_{20}O_2$, from diphenylphenanthrone (ACREE), A., i, 216.

$C_{27}H_{42}O_6$, from cholesterol (WINDAUS), A., i, 128.

$C_{32}H_{28}O_5N_2$, and its salts and lactone, from *o*-benzoylaminocinnamaldehyde (REISSERT), A., i, 926.

$C_{34}H_{32}O_8N_2$, and its ethyl ester, from di-α-monobromopropionyldiphenylethylenediamine and the sodium derivative of ethyl salicylate (BISCHOFF), A., i, 85.

Acid amides. See Amides.

Acid anhydrides. See Anhydrides.

Acid chlorides, action of silver cyanate on (BILLETER), A., i, 560, 584.

Acidimetry, use of sodium carbonate and sodium oxalate as the standard substances in (SÖRENSEN and ANDERSEN), A., ii, 415.

Acids, formation of, by enzymes (HINKINS), A., ii, 183.

and pseudo-acids, suggested nomenclature of (HANTZSCH), A., i, 317.

method for the determination of the affinities of, colorimetrically, by means of certain vegetable colouring matters (KASTLE), A., ii, 154.

heats of mixture of (BOSE), A., ii, 801.

dissociation constant of, colorimetric method for determining the (EIJDMAN), A., ii, 688.

action of inorganic compounds on optically active (GROSSMANN), A., i, 415.

containing an ethylenic linking, action of iodine and yellow oxide of mercury on (BOUGAULT), A., i, 9.

containing a methylene or methinene grouping, constitution of sodium salts of (HALLER and MULLER), A., i, 112.

Acids, detection of (CASTELLANA), A., ii, 420; (BENEDICT and SNELL), A., ii, 609.
estimation of, combined with aluminium (SCHMATOLLA), A., ii, 357.
Acids, aromatic carboxylic, electrolytic reduction of, to the corresponding alcohols (METTLER), A., i, 436.
aromatic fatty, formation of, in the animal body (KNOOP), A., ii, 46.
carboxylic, reduction of, to derivatives of aldehydes (HENLE), A., i, 490.
complex inorganic, derivatives of (ROGERS and SMITH), A., ii, 38.
dibasic, synthesis of (BLANC), A., i, 680, 681.
as-di- and -poly-basic, esterification of (WEGSCHEIDER and BONDI), A., i, 895.
fatty, formation of, from lactic acid when fused with alkali hydroxides (RAPER), A., i, 405.
heat of combustion and formation of (THOMSEN), A., ii, 573.
conductivity, density, compressibility, and surface tension of aqueous solutions of (DRUCKER), A., ii, 680.
chlorination of (BLANK), A., i, 405.
action of, on metallic chlorides (BENRATH), A., i, 734; ii, 705.
monohalogen substituted, and their derivatives, action of potassium ethyl xanthate on (TRÖGER and VOLKMER), A., i, 15.
action of potassium and potassium methyl and ethyl xanthates on (HOLMBERG), A., i, 323.
fatty volatile, in cheese (JENSEN), A., ii, 114.
estimation of, in palm oils and butter (JENSEN), A., ii, 772.
normal, standardising of (SEBELIEN), A., ii, 551.
organic, electrolysis of, by means of an alternating current (BROCHET and PETIT), A., ii, 227.
solubilities of, in water (DOLIŃSKI), A., i, 524.
action of sulphuric acid on (OECHSNER DE CONINCK and RAYNAUD), A., i, 321.
use of, for the precipitation and separation of thorium dioxide from cerium, lanthanum, and didymium oxides (KOLB and AHRLE), A., ii, 288.
simultaneous variations of, in some oleaginous plants (ANDRÉ), A., ii, 605.
Acids, organic, iron salts, resemblance of, to salts of nitro-derivatives (KONOWALOFF), A., i, 8.
sparingly soluble, influence of various sodium salts on the solubility of (PHILIP), T., 987; P., 200.
tertiary, elimination of carbon monoxide from, with concentrated sulphuric acid (BISTRZYCKI and REINTKE), A., i, 285.
unsaturated, action of ethyl sodiomalonate on the sodium salts of (REINICKE), A., i, 787; (VORLÄNDER and SIEBERT), A., i, 794.
hydrogenation of esters of (BOUVEAULT and BLANC), A., i, 11.
separation of isomerides of (BOUGAULT), A., i, 9.
unsaturated open-chain, migration of the ethylenic linking in (BLAISE and LUTTRINGER), A., i, 168.
volatile, estimation of, in wine (WINDISCH and ROETTGEN), A., ii, 212, 361.
See also Aldehydo-acids, Aldehydocarboxylic acids, Alkyloxy-acids, Amino-acids, Aminohydroxy-acids, Aminosulphonic acids, Anhydrocarboxylic acids, Diamino-acids, Disulpho-acids, Hydroxy-acids, Hydroxycarboxylic acids, Keto-fatty acids, Ketonic acids, Lactonic acid, Methoxy-acids, and Thio-acids.
Aconic acid, phenylhydrazine derivatives of (REITTER and BENDER), A., i, 669.
Aconine and its tetra-acetyl derivative (SCHULZE), A., i, 657.
Aconines, properties of (DUNSTAN and HENRY), T., 1654; P., 235.
Aconitanilic acid, esters (BERTRAM), A., i, 465.
Aconite alkaloids. See Alkaloids.
Aconite-monoanilidic acid, and its aniline salt (BERTRAM), A., i, 465.
Aconitic acid, *as*-imide of, and its silver salt (SCHROETER, SCHWAMBORN, and STASSEN), A., i, 819.
Aconitic trimethylamide (BERTRAM), A., i, 466.
Aconitine, triacetyl derivative (SCHULZE), A., i, 656.
reactions of (ALVAREZ), A., ii, 491; (REICHARD), A., ii, 777.
ψ-Aconitine, formula of (DUNSTAN and ANDREWS), T., 1636; P., 234.
Aconitines from various aconites, composition and properties of (DUNSTAN and HENRY), T., 1650; P., 235.
Acraldehyde, preparation of, by the boric acid method (LOCKEMANN and LIESCHE), A., i, 570.

Acridan, definition of the term (DECKER), A., i, 667.
Acridine series, studies in the (HEWITT and FOX), T., 1058; P., 215.
Acridines, interaction of, with magnesium alkyl halides (SENIER, AUSTIN, and CLARKE), T., 1469; P., 227.
Acridone, 2:4-*di*hydroxy-, and its derivatives (BACZYŃSKI and v. NIEMENTOWSKI), A., i, 927.
Acridylphenylethanol and its additive salts (FRIEDLÄNDER), A., i, 829.
Acrylic acid, chloro-, iodosochloride, α-chloro-β-iodo-, and chloroiodoso-, and its acetyl derivative (THIELE and PETER), A., i, 735.
Acrylic acids, substituted, esterification constants of (SUDBOROUGH and ROBERTS), T., 1840; P., 86.
Actinia mesembryanthemum, pigment of (GRIFFITHS), A., i, 293.
Actinium and emanium (MARCKWALD), A., ii, 497.
the degradation constant of the emanations from (HAHN and SACKUR), A., ii, 432.
and its successive products (GODLEWSKI), A., ii, 497.
β- and γ-rays, absorption of (GODLEWSKI), A., ii, 666.
gases produced by (DEBIERNE), A., ii, 623.
Acylcyanoacetic acids, alkyl esters, constitution of (HALLER and MULLER), A., i, 112.
Acyl groups, intramolecular migration of (WISLICENUS), A., i, 170.
Acyl-hydrazines, condensation of, with aldehydes and ketones, metallic derivatives of, and their behaviour towards acid chlorides and iodine (STOLLÉ and MÜNCH), A., i, 94.
Address, presidential (TILDEN), T., 546; P., 104.
Adenase (SCHITTENHELM), A., i, 108, 645; (SCHENCK), A., ii, 266; (JONES and WINTERNITZ), A., ii, 333; (JONES), A., ii, 644.
Adenine, 2-amino-, and its salts (TRAUBE), A., i, 101.
Adipic acid, preparation of (HOLLEMAN, VAN DER LAAN, and SLIJPER), A., i, 444.
α-amino-, and its copper salt (DIECKMANN), A., i, 417.
αβγ-*tri*hydroxy-, and its metallic and quinine salts (KILIANI), A., i, 859.
Adrenaline. See Epinephrine.
AFFINITY, CHEMICAL:—
Affinities of acids, method for the determination of, colorimetrically, by means of certain vegetable colouring matters (KASTLE), A., ii, 154.
AFFINITY, CHEMICAL:—
Association in mixed solvents (BARGER), T., 1042; P., 204.
Chemical action, action of radium rays on (JORISSEN and RINGER), A., ii, 219.
Chemical change and radioactivity (CAMPBELL), A., ii, 296.
Chemical changes which are reversible, kinetics of (FAWSITT), T., 494; P., 115.
Chemical dynamics, a rule in (PLOTNIKOFF), A., ii, 376, 571; (AUERBACH), A., ii, 571.
of alcoholic fermentation by yeast (SLATOR), P., 304.
of development (SHEPPARD and MEES), A., ii, 294, 784.
of the reaction between sodium thiosulphate and organic halogen compounds (SLATOR), T., 481; P., 121.
Chemical equilibrium, determination of, from explosion processes (FINCKH; NERNST), A., ii, 444.
thermodynamic potential and its application to problems of (VAN LAAR), A., ii, 683.
and reaction velocity in homogeneous systems and their bearing on cases of enzyme action (VISSER), A., ii, 577.
of binary solutions, influence of substitution in the components on the (KREMANN), A., i, 270; ii, 77.
of the same reaction in different solvents, magnitude of the (PISSARJEWSKY), A., ii, 16.
of the electrolytic dissociation of partially neutralised acids and bases (ÔSAKA), A., ii, 804.
among certain bases in simultaneous contact with phosphoric acid (QUARTAROLI), A., ii, 821.
measurements of, in the contact process of preparing sulphur trioxide (BODENSTEIN and POHL), A., ii, 581.
between acetone and hydroxylamine hydrochloride (LANDRIEU), A., ii, 445.
between calcium and other salts in the formation of oceanic salt deposits (VAN'T HOFF and BLASDALE), A., ii, 641.
the system, cupric chloride, ammonium chloride, and water (MEERBURG), A., ii, 17.
in the system, $GlO:SO_3:H_2O$ (PARSONS), A., ii, 34.

AFFINITY, CHEMICAL:—
Chemical equilibrium, chemical and electrical examination of the, $HIO_3+5HI \rightleftharpoons 3I_2+3H_2O$ and $HBrO_3+5HBr \rightleftharpoons 3Br_2+3H_2O$ (LUTHER and SAMMET), A., ii, 508.
between magnesium and sodium sulphates (DENISON), A., ii, 456.
between a nitrogen base and organic acids in various solvents (SILL), A., ii, 377.
between ozone and hydrochloric acid (JAHN), A., ii, 16.
nuclear synthetical, between phenols, bicarbonates, and phenolcarboxylic acids in aqueous solution (HÄLLSTRÖM), A., ii, 511.
the system, potassium iodate, iodic acid, and water at 30° (MEERBURG), A., ii, 17.
some determinations in the systems, KIO_3—HIO_3—H_2O, $NaIO_3$—HIO_3—H_2O, and NH_4IO_3—HIO_3—H_2O (MEERBURG), A., ii, 508.
the system pyridine and methyl iodide (ATEN), A., ii, 237.
Equilibrium constant, influence of the solvent on the (PISSARJEWSKY and LEMCKE), A., ii, 684.
Chemical reaction, possibility of (DE FORCRAND), A., ii, 15.
condition of a, forming a monovariant system (MATIGNON), A., ii, 235.
Chemical reactions, prediction of (DE FORCRAND), A., ii, 15.
which take place in several stages (BRUNNER), A., ii, 511.
use of the hot and cold tube in the study of (BERTHELOT), A., ii, 308, 378, 810.
Reactions, some thermochemical rules relating to the possibility and prognostication of (BERTHELOT), A., ii, 76.
Catalysis, periodic contact (BREDIG and WILKE), A., ii, 151.
by cyanide ions (STERN), A., ii, 150.
by ferments (v. EULER), A., ii, 693.
new case of, by hydrogen ions (BREDIG), A., ii, 692.
influence of alkaloids and alkaloidal salts on (BROWN and NEILSON), A., ii, 447.
rôle of diffusion during, by colloidal metals (SAND), A., ii, 233; (SENTER), A., ii, 379.
Catalytic ester exchanges (KREMANN), A., ii, 630.

AFFINITY, CHEMICAL:—
Catalytic reactions, theory of (KULL GREN), A., ii, 237.
heterogeneous (BODENSTEIN and OHLMER), A., ii, 692.
Dissociating compounds, fusion of and the degree of dissociation of the fused substance (KREMANN), A., i, 270; ii, 76.
Dissociation, effect of temperature on (JONES and WEST), A., ii, 794.
of electrolytes (LIEBENOFF), A., ii, 499.
of ternary electrolytes (KÜMMEL), A., ii, 226, 502; (DRUCKER), A., ii, 371.
of nitro-compounds in certain solvents (BRUNI and SALA), A., ii, 146.
of double salts in water (RIMBACH and GREWE), A., ii, 375.
Dissociation constant of acids, colorimetric method for determining the (EIJDMAN), A., ii, 688.
Distribution of soluble substances between water and aromatic hydrocarbons (HERZ and FISCHER), A., ii, 304.
of soluble substances between water and amyl alcohol (HERZ and FISCHER), A., ii, 79.
Dynamic isomerism (LOWRY), A., ii, 16.
Energy of formation, free (v. JÜPTNER), A., ii, 16.
Enzyme action, studies on (SENTER), A., i, 107; ii, 377, 380; (HENRI), A., ii, 237; (v. EULER), A., ii, 378.
reaction velocity and chemical equilibrium in relation to (VISSER), A., ii, 577.
Hydrolysis, contributions to the theory of (KREMANN), A., ii, 630.
of esters in heterogeneous systems (KREMANN), A., ii, 307, 688; (GOLDSCHMIDT), A., ii, 578.
Hydrolytic decomposition in non-aqueous solutions (BRUNI and MANUELLI), A., ii, 689.
Kinetics of the benzoin synthesis (STERN), A., ii, 150.
of the nitration reaction (MARTINSEN), A., ii, 149.
of processes of oxidation (SKRABAL), A., ii, 804.
of reactions in heterogeneous systems; hydrolysis in non-homogeneous systems (KREMANN), A., ii, 307.

AFFINITY, CHEMICAL:—
Kinetics of reactions in mixtures of water and alcohol (KREMANN), A., ii, 307.
of the reaction between potassium permanganate and oxalic acid (SKRABAL), A., ii, 17.
Kinetic measurements, use of the differential equation in calculating the results of (BRAY), A., ii, 690.
Kinetic study of organic reactions (GOLDSCHMIDT), A., ii, 691.
Velocity of change in catalytic reactions (KULLGREN), A., ii, 237.
Velocity of chemical auto-heating (BREDIG and EPSTEIN), A., ii, 75.
Velocity of decomposition of ammonium nitrite (BLANCHARD), A., ii, 237.
of hydrogen peroxide by hæmase, effect of "poisons" on the (SENTER), A., i, 107; ii, 380.
Velocity of hydrolysis, influence of hydroxyl and alkoxyl groups on the (FINDLAY and TURNER), T., 747; P., 127.
Velocity of reaction and free energy (BRUNNER), A., ii, 236.
in heterogeneous systems (SENTER), A., ii, 377.
discussion of Nernst's theory of the (SAND), A., ii, 233; (SENTER), A., ii, 380.
and chemical equilibrium in homogeneous systems and their bearing on cases of enzyme action (VISSER), A., ii, 577.
cause of the period of induction in the union of hydrogen and chlorine (CHAPMAN and BURGESS), A., ii, 236, 697.
Agglutinins, action of (HENRI), A., ii, 237.
Air. See Atmospheric air.
Air pump, Töpler mercury, two modifications of the (STOCK), A., ii, 514.
β-Alacreatine and **β-Alacreatinine** and their additive salts (HOLM), A., i, 29.
Alanine, *N*-acyl derivatives (FISCHER and KOENIGS), A., i, 32.
α-bromoisohexoyl derivative (FISCHER and WARBURG), A., i, 691.
β-Alanine and its esters, and their additive salts (HOLM), A., ii, 29.
Alanyl chloride hydrochloride (FISCHER and REUTER), A., i, 264; (FISCHER), A., i, 864.
Alanylalanine and its derivatives (FISCHER and KAUTZSCH), A., i, 637.
Alanylglycine and its α-bromoisohexoyl derivative (FISCHER and AXHAUSEN), A., i, 689.
d-**Alanylglycine** (FISCHER), A., i, 864.
l-**Alanylglycine** (FISCHER and WARBURG), A., i, 691.
Alanyl-leucines and their phenylcarbamide derivatives (FISCHER and WARBURG), A., i, 691.
Alanyl-leucylglycine (FISCHER and BRUNNER), A., i, 690.
Albans from various gutta-perchas (TSCHIRCH and MÜLLER), A., i, 452, 453, 454.
Albumin, constitution of the indole group in (ELLINGER), A., i, 827.
precipitated by heat in presence of acid, action of pepsin on (DISDIER), A., i, 251.
colloidal, precipitation of (MATHEWS), A., i, 846.
precipitation of, by means of salts of heavy metals (PAULI), A., i, 496.
estimation of, in barley (HEERDE and BUSCH), A., ii, 364.
Albumins, oxidation of (v. FÜRTH), A., i, 497.
Albumose, chemical changes attending the aërobic bacterial fermentation of (ADENEY), A., ii, 340.
Alcohol. See Ethyl alcohol.
Alcohol, $C_7H_{16}O_3$, from the dihydroxyaldehyde, $C_7H_{14}O_3$ (WEIS), A., i, 17.
$C_7H_{16}O_3$, and its triacetate, from the aldol, $C_7H_{14}O_3$ (LICHTENSTERN), A., i, 509.
$C_{10}H_{18}O$, and its phenylurethanes, from ginger grass oil (WALBAUM and HÜTHIG), A., i, 604.
$C_{15}H_{16}O$, from phenylmethylethylene oxide (TIFFENEAU), A., i, 524.
$C_{15}H_{18}O$, from the action of phenylacetylene on methylcyclohexanone in presence of potassium hydroxide (BERTRAND), A., i, 775.
$C_{16}H_{14}O$, from the action of phenylacetylene on acetophenone in presence of potassium hydroxide (BERTRAND), A., i, 775.
$C_{18}H_{26}O$, from the action of phenylacetylene on menthone in presence of potassium hydroxide (ROMANOFF), A., i, 775.
Alcoholic fermentation. See Fermentation.
Alcohols, formation of, from acid amides (SCHEUBLE and LOEBL), A., i, 2.
heats of combustion and formation of (THOMSEN), A., ii, 573.
osmotic experiments on mixtures of water with (BARLOW), A., ii, 507.
reaction of, with *l*-menthylcarbimide (PICKARD, LITTLEBURY, and NEVILLE), P., 286.

Alcohols, action of metalammonium compounds on (CHABLAY), A., i, 502.
action of, on Echinoderm eggs (FÜHNER), A., ii, 49.
colour reactions for (GUÉRIN), A., ii, 209.
Alcohols, aromatic, formation of, from amino-acids (LANGGUTH), A., i, 593.
formation of, from the corresponding carboxylic acids (METTLER), A., i, 436.
fatty, action of phosphorous haloids on (WALKER and JOHNSON), T., 1592; P., 232.
higher fatty, estimation of, colorimetrically, in brandies (ROCQUES), A., ii, 359.
estimation of, in spirits (BECKMANN), A., ii, 768.
hydroaromatic, conversion of, into benzene derivatives (AUWERS and HESSENLAND), A., i, 434.
mono- and poly-hydric, synthesis of (GRIGNARD), A., i, 593.
polyhydric, action of metalammonium compounds on (CHABLAY), A., i, 502.
optically active, action of inorganic compounds on (GROSSMANN), A., i, 415, 861.
esterification of, by phosphoric and phosphorous acids (CARRÉ), A., i, 814.
normal C_9 secondary (HENRY), A., i, 402.
primary, saturated and unsaturated, formation of (BOUVEAULT and BLANC), A., i, 11, 13.
primary, secondary, and tertiary, reaction distinguishing between (SABATIER and SENDERENS), A., i, 254.
saturated cyclic, synthesis of alkyl derivatives of (HALLER and MARCH), A., i, 276.
unsaturated, formation of (FAWORSKY), A., i, 773; (SKOSSAREWSKY; BORK), A., i, 774; (NEWEROWITSCH; BERTROND; ROMANOFF), A., i, 775.
Alcohols, *aci-di*nitro- (DUDEN and PONNDORF), A., i, 558.
See also Amino-alcohols, Glycols, and Ketonic alcohols.
Aldehyde. See Acetaldehyde.
Aldehyde, $C_{10}H_{16}O$, and its derivatives, from ginger grass oil (WALBAUM and HÜTHIG), A., i, 603.
$C_{12}H_{22}O_2$, and its dibromide, from the condensation of *n*-butaldehyde and sulphuric acid (GORHAN), A., i, 171.
Aldehyde, $C_{12}H_{13}ON$, and its salts, oxime, and phenylhydrazone, from the methylaniline compound of dinitrophenylpyridinium chloride (ZINCKE and WÜRKER), A., i, 242.
$C_{12}H_{12}ONBr$, and its salts, oxime, and phenylhydrazone, from the methyl-*p*-bromoaniline compound of dinitrophenylpyridinium chloride (ZINCKE and WÜRKER), A., i, 242.
Aldehyde-ammonia, action of light on a mixture of, with hydrogen cyanide (CIAMICIAN and SILBER), A., i, 414.
reactions of (DUDEN, BOCK, and REID), A., i, 568.
Aldehyde hydrogen sulphites, formulæ for (ROSENHEIM), A., i, 508.
Aldehydes, preparation of (FARBENFABRIKEN VORM. F. BAYER & CO.), A., i, 355; (SABATIER and SENDERENS), A., i, 401.
synthesis of, by means of formic acid (HOUBEN), A., i, 600.
synthesis of, by means of the substituted glycidic acids (DARZENS), A., i, 116.
heats of combustion and formation of (THOMSEN), A., ii, 573.
replacement of the aldehyde oxygen atom in, by two univalent hydrocarbon radicles by means of Grignard's reaction (F. and L. SACHS), A., i, 190, 274.
action of acid amides on (REICH), A., i, 35.
condensation of, with *o*-amino-*m*-xylyl-*p*-toluidine (v. WALTHER and BAMBERG), A., i, 298.
action of tetrabromo-*o*-benzoquinone on (JACKSON and RUSSE), A., i, 217.
condensation of, with dibenzoyl ketone under the influence of hydrochloric acid (HERTZKA), A., i, 291.
condensation of, with hippuric acid (ERLENMEYER and MATTER; ERLENMEYER and STADLIN), A., i, 238; (ERLENMEYER and WITTENBERG), A., i, 240.
condensation of, with imines (MAYER), A., i, 214.
condensation of, with ketones (v. LIPPMANN and FRITSCH), A., i, 443.
condensation of, with ketones in presence of potassium cyanide (SALKIND), A., i, 732.
condensation of, with α-ketonic acids by means of hydrochloric acid or sodium hydroxide (ERLENMEYER), A., i, 783.

Aldehydes, condensation of, with ketonic compounds (KNOEVENAGEL), A., i, 61; (KNOEVENAGEL and ALBERT), A., i, 62; (KNOEVENAGEL and HERZ; KNOEVENAGEL and SCHRÖDER), A., i, 63; (KNOEVENAGEL and LANGENSIEPEN), A., i, 64; (KNOEVENAGEL and ARNOT; KNOEVENAGEL and WALTER), A., i, 65.
action of mercury cyanide on (MARSH and STRUTHERS), T., 1882; P., 248.
condensation of, with rhodanic acids (ANDREASCH and ZIPSER), A., i, 931; (STUCHETZ), A., i, 933.
phosphorus acid derivatives of (MARIE), A., i, 17.
tests for (LEYS), A., ii, 655; (RAMSDEN), A., ii, 770.
a new reaction of, and the isomerism of their oximes (CONDUCHÉ), A., i, 288.
estimation of, by means of their nitrophenylhydrazones (ALBERDA VAN EKENSTEIN and BLANKSMA), A., i, 474.
estimation of, in essential oils (SADTLER), A., ii, 867.
indirect estimation of, in oil of lemon (BERTÉ), A., ii, 656.
Aldehydes, aromatic, and aromatic ketones, characterisation of (PETRENKO-KRITSCHENKO and DOLGOPOLOFF), A., i, 354; (PETRENKO-KRITSCHENKO, ELTSCHANINOFF, KESTNER, and DOLGOPOLOFF), A., i, 742.
action of, on sodium 1-methyl-3-cyclohexanoxide (HALLER and MARCH), A., i, 771.
action of nitrogen sulphide on (DAVIS), T., 1831; P., 258.
compounds of, with magnesium derivatives of ethylene dibromide (AHRENS and STAPLER), A., i, 423, 868.
compounds of, with β-phenylhydroxylamine (PLANCHER and PICCININI), A., i, 705.
fatty, preparation of (BOUVEAULT), A., i, 116.
electrolytic oxidation of (LAW), T., 198; P., 7.
condensation products of, with negatively-substituted acetic acids (KNOEVENAGEL), A., i, 169.
action of, on the sodium derivative of primary aromatic amines (ORLOFF), A., i, 189.
See also Hydroxyaldehydes and Ketonic aldehydes.
Aldehydesulphurous acid, constitution of (REINKING, DEHNEL, and LABHARDT), A., i, 261.
Aldehydo-acids (BLAISE and COURTOT), A., i, 562.
γ-Aldehydobutyric acid and its phenylhydrazone (ELLINGER), A., i, 828.
o-Aldehydocarboxylic acids, products of the condensation of (BRUNS), A., i, 353; (GADAMER), A., i, 368; (GOLDSCHMIEDT), A., i, 527.
condensation of, with ketones (LUKSCH), A., i, 68.
Alder bark, estimation of the active principles of (WARIN), A., ii, 363, 659.
Aldol, $C_6H_{12}O_4$, and its diacetate, from ethoxyacetaldehyde and formaldehyde (KLÜGER), A., i, 684.
$C_7H_{14}O_2$, from isovaleraldehyde and acetaldehyde (EHRENFREUND), A., i, 861.
$C_7H_{14}O_3$, and its oxime and diacetylnitrile, from isovaleraldehyde and formaldehyde (LICHTENSTERN), A., i, 509.
$C_{10}H_{18}O_2$, and its oxime and acetyl derivative, from methylethylacraldehyde and isobutaldehyde (MORAWETZ), A., i, 262.
$C_{10}H_{20}O_2$, from isovaleraldehyde (RAINER), A., i, 16.
Aldols. See β-Hydroxyaldehydes.
Aldoximes, hydrogenation of (MAILHE), A., i, 571.
condensation of, with isonitrosoketones (DIELS and VAN DER LEEDEN), A., i, 946.
Aleurone grains, composition and signification of (POSTERNAK), A., ii, 276.
Algæ, marine, the carbohydrates of, and their products (KÖNIG and BETTELS), A., ii, 851.
Alimentary canal, movements of the, after section of nerves (CANNON), A., ii, 179.
Alizarin, action of a mixture of glacial acetic acid and hydriodic acid on (LAGODZINSKI), A., i, 601.
2-methyl ether, 4-bromo- (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 709.
dimethyl ether (GRAEBE), A., i, 219; (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 654.
Alkali carbonates and hydroxides, action of carbon dioxide on (RAIKOW), A., ii, 85.
chlorides, compounds of, with ferric chloride, formation and solubility of (HINRICHSEN and SACHSEL), A., ii, 92.
copper cyanides (GROSSMANN and VON DER FORST), A., i, 179.

Alkali haloids, determination of the specific gravity of (BUCHANAN), P., 122.
hydrides, influence of traces of moisture on the decomposition of, by carbon dioxide or acetylene (MOISSAN), A., ii, 818.
hydrogen carbonates, complex compounds of, with heavy metals (LUTHER and KRSNJAVI), A., ii, 705.
hydroxides, action of, on sulphur (POMERANZ), A., ii, 698.
*peri*odates, normal basicity of (GIOLITTI), A., ii, 311.
metals and alkaline-earth metals, position of, in the electrochemical series at high temperatures (DANNEEL and STOCKEM), A., ii, 388.
and their salts, emission of light from the vapours of, and the centre of this emission (LENARD), A., ii, 565.
emission of negative corpuscles by (THOMSON), A., ii, 791.
boiling points of the (RUFF and JOHANNSEN), A., ii, 818.
relation of ammonium to the (TUTTON), T., 1123; P., 177.
*hepta*molybdates, estimation of, iodometrically (GLASMANN), A., ii, 209.
nitrites, preparation of (GROSSMANN), A., ii, 819.
and their decomposition by heat (RÂY), T., 177.
oxides, affinity of, towards various anhydrides (GERASSIMOFF), A., ii, 85.
*per*oxides, action of boric acid on the (JAUBERT), A.,.ii, 26.
salts from the region of Lake Chad (COURTET), A., ii, 173.
selenates and sulphates, topic parameters of (TUTTON), T., 1183; P., 217.
vanadates, spitting of (PRANDTL), A., ii, 170.
Alkaline-earth carbonates, decomposition of, by alkali chlorides in presence of water (CANTONI and GOGUELIA), A., ii, 87.
dissociation of (BRILL), A., ii, 522.
and hydroxides, action of carbon dioxide on (RAIKOW), A., ii, 85.
copper cyanides (GROSSMANN and VON DER FORST), A., i, 180.
fluorides, spectra of, in the electric arc (FABRY), A., ii, 217.
hydrides, reactions of (MOISSAN), A., ii, 818.
Alkaline-earth metals and alkali metals, position of, in the electrochemical series at high temperatures (DANNEEL and STOCKEM), A., ii, 388.
nitrites and their decomposition by heat (RÂY), T., 177.
silicates (JORDIS and KANTER), A., ii, 88, 248; (JORDIS), A., ii, 248.
sulphides, phosphorescing, chemistry of (WAENTIG), A., ii, 365.
Alkalis, influence of, on the growth of bone (ARON), A., ii, 100.
estimation of, in silicates by L. Smith's method (STEINLEN), A., ii, 349; (MARGOSCHES), A., ii, 421.
Alkaloids, Aconite (DUNSTAN and ANDREWS), T., 1620, 1636; P., 233, 234; (DUNSTAN and HENRY), T., 1650; P., 235.
Cinchona, estimation of, volumetrically, by means of their double thiocyanates (ROBERTSON), P., 242.
Conium, separation of (*v.* BRAUN), A., i, 811.
Corydalis (HAARS), A., i, 462.
physiological action of (GADAMER), A., ii, 411.
from Datura (SCHMIDT; KIRCHER), A., i, 717.
distribution of, in the organs of *Datura Stramonium* (FELDHAUS), A., ii, 648.
from *Papaver dubium* (PAVESI), A., i, 368.
urinary, toxicity of (GUILLEMARD and VRANCEANO), A., ii, 470.
origin of, in plants (PICTET), A., i, 541.
influence of, on certain processes of oxidation (FEDER), A., i, 150.
action of calcium permanganate on (BAUDRAN), A., ii, 107.
action of chemical oxydases on the toxicity of (BAUDRAN), A., ii, 632.
constitution of ψ-ammonium bases with reference to the (GADAMER), A., i, 368.
quaternary ammonium compounds of the (SCHOLTZ and BODE), A., i, 79.
reactions of (REICHARD), A., ii, 68, 127, 561, 563, 659, 777, 871.
estimation of, by means of potassium bismuth iodide (THOMS), A., ii, 561.
estimation of, in coca leaves (DE JONG), A., ii, 778.
Alkyl bromides and iodides, action of phenylhydrazine on (ALLAIN LECANU), A., i, 375.
haloids, preparation of (WEINLAND and SCHMID), A., i, 557, 850.

Alkyl haloids, formation of, by the interaction of alcohols and phosphorous haloids (WALKER and JOHNSON), T., 1592; P., 232.
catalytic decomposition of, by means of anhydrous metallic chlorides (SABATIER and MAILHE), A., i, 677.
sulphides, action of α-halogen ketones on (SMILES), P., 93.
Alkylacetoacetic acids, ethyl esters, preparation of (MICHAEL), A., i, 564.
α-Alkylacrylic acids, esters (BLAISE and LUTTRINGER), A., i, 626.
Alkyl allyl ketones, migration of the ethylenic linking in (BLAISE), A., i, 118.
Alkylaminoacetylcatechols, physiological properties of (STOLZ and MEYER), A., i, 106.
Alkylaminoanthraquinones, nitro-derivatives of (FARBENFABRIKEN VORM. F. BAYER & CO.), A., i, 361.
Alkylarsonic acids, preparation and reduction of (DEHN), A., i, 184.
5-Alkylbarbituric acids (FISCHER and DILTHEY), A., i, 37.
α-Alkylhydracrylic acids (BLAISE and LUTTRINGER), A., i, 505.
Alkylideneoxazolones. See Azlactones.
Alkyloxides, preparation of (CHABLAY), A., i, 502.
Alkyloxy-acids, esters, reduction of (BOUVEAULT and BLANC), A., i, 12.
2-Alkyloxypyrimidines (FARBENFABRIKEN VORM. F. BAYER & CO.), A., i, 159.
Alkyl-sulphonic and **-sulphurous acids**, salts of (ROSENHEIM and SAROW), A., i, 404.
Allantoin, formation of, in the animal body (EPPINGER), A., ii, 336.
Allene, liquefaction of (LESPIEAU and CHAVANNE), A., i, 401.
Allo-. See under the parent Substance.
Alloxan, condensation products of, with saturated ketones (KÜHLING), A., i, 944.
Alloxandiphenylhydrazone (ARMSTRONG and ROBERTSON), T., 1291; P., 180.
Alloys, deposition of, from mixed solutions (JACOBS), A., ii, 626.
magnetic qualities of, not containing iron (FLEMING and HADFIELD), A., ii, 799.
alteration of the specific gravity of, owing to deformation (KAHLBAUM and STURM), A., ii, 680.
specific volume as the determining criterion of chemical combination in (MAEY), A., ii, 146.
employment of thermal analysis in (TAMMANN), A., ii, 444.
Allyl alcohol and water, viscosity of (DUNSTAN), T., 11.
Allyl iodochloride (THIELE and PETER), A., i, 736.
2-Allylamino-4-methylthiazole and its acetyl derivative (YOUNG and CROOKES), P., 308.
o-Allylaniline, *N*-benzoyl derivative (v. BRAUN and STEINDORFF), A., i, 156.
***p*-Allylanisole** (VERLEY), A., i, 127.
Allylbenzene oxide (FOURNEAU and TIFFENEAU), A., i, 591.
Allylene, liquefaction of (LESPIEAU and CHAVANNE), A., i, 401.
action of, on solutions of mercuric chloride (BILTZ and MUMM), A., i, 2.
Allylglycine, synthesis of (SÖRENSEN), A., i, 750.
2-Allylimino-3:4-dimethyl-2:3-dihydrothiazole and its hydriodide (YOUNG and CROOKES), P., 308.
***p*-Allylphenol**, alkyl ethers of (VERLEY), A., i, 127.
Allyl*iso*propenylmethane (*β-methyl* $\Delta^{\alpha\epsilon}$-*hexadiene*) and its nitrosochloride (PERKIN and PICKLES), T., 658; P., 131.
4-Allylpyridine and its additive salts (AHRENS), A., i, 232.
1-Allyltetrahydroquinoline (WEDEKIND), A., i, 234.
Allylthujone and its semicarbazone (HALLER), A., i, 602.
1-Allyl-1:2:4-triazole and its additive salts (PELLIZZARI and SOLDI), A., i, 673.
Aloes (TSCHIRCH and HOFFBAUER), A., i, 913.
evaluation of (VAN ITALLIE), A., ii, 779.
Aloin-reds (TSCHIRCH and HOFFBAUER), A., i, 913.
Aloins from various aloes (TSCHIRCH and HOFFBAUER), A., i, 913.
Alphylsulphonaminonaphthol derivatives, azo-dyes from (BADISCHE ANILIN- & SODA-FABRIK), A., i, 250.
Aluminides. See under Aluminium.
Aluminium, metallic, preparation of (SCHWAHN), A., ii, 712.
deposition of, from ethyl bromide solution (PATTEN), A., ii, 36.
anode. See under Electrochemistry.
as a preventive of acute and chronic mercury poisoning (TARUGI), A., ii, 205.
Aluminium alloys, preparation of (PRING), T., 1530; P., 230.
with antimony, bismuth, copper, tin, and zinc. See Zisium.

Aluminium alloys with bismuth, with tin, and magnesium, properties of (PÉCHEUX), A., ii, 526.
with calcium (ARNDT), A., ii, 453.
with copper (GUILLET), A., ii, 712.
special constituent obtained in the tempering of an (BREUIL), A., ii, 252.
with magnesium (GRUBE), A., ii, 523.
See also Magnalium.
with silver (PETRENKO), A., ii, 635.
with zinc (SHEPHERD), A., ii, 588.
See also Ziskon.
Aluminium compounds, blue, deposited on the aluminium anode (FISCHER), A., ii, 252.
Aluminium salts, action of, on plants (YAMANO), A., ii, 344.
Aluminium bromide, hydrated, dehydration of (KREIDER), A., ii, 636.
carbide, preparation of, and its action on metals and metallic oxides (PRING), T., 1530; P., 230.
chloride, compounds of, with carbonyl chloride (BAUD), A., ii, 525.
Aluminides, preparation of (JÜNGST & MEWES) A., ii, 316.
Aluminium hydroxide, new isomeric modification of (TOMMASI), A., ii, 712.
double silicides (MANCHOT and KIESER), A., ii, 165.
Aluminium, detection of, in plants (PELLET and FRIBOURG), A., ii, 860.
use of tannic acid in the estimation of (DIVINE), A., ii, 205.
estimation of, in aluminium chloride and sulphate (MOODY), A., ii, 765.
estimation of, in plant ash (PELLET and FRIBOURG), A., ii, 861.
estimation of acids combined with (SCHMATOLLA), A., ii, 357.
separation of glucinum from iron and (VAN OORDT), A., ii, 88.
"**Aluminium carbonicum**" (GAWALOWSKI), A., ii, 713.
Aluminium powder, different states of oxidation of (KOHN-ABREST), A., ii, 637.
Aluminium rectifier (CHARTERS), A., ii, 225.
Aluminium steels, constitution and properties of (GUILLET), A., ii, 526.
Alumino-silicates, basic, containing haloids (WEYBERG), A., ii, 89.
Alypin (*tetramethyldiaminodimethylethylcarbinyl benzoate*), local anæsthesia produced by (IMPENS), A., ii, 842.
Amalgams. See Mercury alloys.
Amanita muscaria (fly agaric) (ZELLNER), A., ii, 550.
Amanitole (ZELLNER), A., ii, 550.
Amide formation between optically active acids and bases (MARCKWALD and METH), A., i, 272.
Amides, acid, formation of (HENLE and SCHUPP), A., i, 413.
action of, on aldehydes (REICH), A., i, 35.
formation of alcohols from (SCHEUBLE and LOEBL), A., i, 2.
compounds of, with formaldehyde (EINHORN), A., i, 344.
hydroxymethyl derivatives of (EINHORN), A., i, 344, 345, 646.
estimation of (EFFRONT), A., ii, 60.
Amidines, contributions to the chemistry of (YOUNG and CROOKES), P., 307.
Amine salts, action of magnesium alkyl haloids on (HOUBEN), A., i, 873.
Amines, preparation of (CLARKE), A., i, 427.
new synthesis of (MAILHE), A., i, 635.
formation of, from the hydrogenation of aldoximes (MAILHE), A., i, 571.
formation of, from the reduction of nitro-derivatives (ALOY and RABAUT), A., i, 517.
heats of combustion and formation of (THOMSEN), A., ii, 574.
nitration of (ANGELI and MARAGLIANO), A., i, 873.
action of magnesium alkyl haloids on (HOUBEN), A., i, 873.
formyl derivatives, preparation of (KUHARA and KISHI), A., i, 861.
picrolonates of (OTORI), A., i, 126.
Amines, aromatic, reaction of, with aromatic azo-compounds, differing from the induline synthesis (WEINSCHENK), A., i, 724.
ω-sulphomethyl derivatives of (BADISCHE ANILIN- & SODA-FABRIK), A., i, 340, 769.
aromatic primary, condensation products of, with formaldehyde (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 643.
introduction of the groups $\cdot CH_2 \cdot OH$ and $\cdot CH_2 \cdot$ into (ORLOFF), A., i, 189.
hydrochlorides of, action of, on cyanoguanidine (A. and L. LUMIÈRE and PERRIN), A., i, 249.
aromatic secondary, action of, on dinitrophenylpyridinium chloride (ZINCKE and WÜRKER), A., i, 241.
aromatic tertiary, action of, on quinones (JACKSON and CLARKE), A., i, 908.
cyclic secondary, reversion of (LEMOULT), A., i, 48.

Amines, cyclic tertiary, action of phosphorus pentachloride on (LEMOULT), A., i, 194.
fatty, action of, on dinitrophenylpyridinium chloride (ZINCKE and WÜRKER), A., i, 923.
fatty primary, action of diazo-compounds on (DIMROTH), A., i, 618.
primary, formation of (LEBEAU), A., i, 512.
primary and secondary, separation of (HINSBERG and KESSLER), A., i, 338.
primary, secondary, and tertiary, synthesis of (SABATIER and SENDERENS), A., i, 267; (FRÉBAULT), A., i, 437; (MAILHE), A., i, 501.
secondary, a reaction of (ANGELI and CASTELLANA), A., i, 491.
tertiary, additive compounds of (HANTZSCH and GRAF), A., i, 575.
reaction between, and magnesium organic compounds (F. and L. SACHS), A., i, 190, 274.
See also Bases and Diamines.
Amino-acids from the edestin of cotton seeds and their behaviour with gastric juice (ABDERHALDEN and ROSTOSKI), A., i, 619.
from the edestin of sunflower seeds, and its behaviour with gastric juice (ABDERHALDEN and REINBOLD), A., i, 620.
obtained by the hydrolysis of the proteids of lupin seeds (WINTERSTEIN and PANTANELLI), A., i, 687.
in molasses (BERTI), A., ii, 759.
from the seedlings of *Vicia sativa* and *Lupinus albus* (SCHULZE and WINTERSTEIN), A., i, 686.
synthesis of (SÖRENSEN), A., i, 749.
and their esters, synthesis of (BOUVEAULT and LOCQUIN), A., i, 32, 33.
action of, on amylase (EFFRONT), A., i, 107.
reactions of, with α-naphthylcarbimide (NEUBERG and MANASSE), A., i, 647.
reactions of, with 4-nitrotoluene-2-sulphonic chloride (SIEGFRIED), A., i, 59.
behaviour of, in the dog's organism (ABDERHALDEN and RONA; ABDERHALDEN and SAMUELY), A., ii, 839.
chlorides of, and their acyl derivatives (FISCHER and REUTER), A., i, 263.
and their use as synthetical agents (FISCHER), A., i, 863.
Amino-acids, copper and nickel salts of (LEY), A., i, 175; (BRUNI), A., i, 263.
estimation of nitrogen in (SÖRENSEN and ANDERSEN), A., ii, 553; (STANĚK), A., ii, 856.
estimation of, in urine (ERBEN), A., ii, 124.
Amino-acids, aromatic, reduction of, to the corresponding alcohols (LANGGUTH), A., i, 593.
inactive, behaviour of, in the organism (WOHLGEMUTH), A., ii, 543.
α-Amino-acids, preparation of (ERLENMEYER), A., i, 131.
synthesis of, from ethyl phthaliminomalonate (SÖRENSEN), A., i, 600.
p-Amino-acids (POSNER), A., i, 577.
Amino-acids. See also Polypeptides.
Amino-alcohols (FOURNEAU), A., i, 57.
of the formula, $C_6H_3(OH)_2 \cdot CH(OH) \cdot CH_2 \cdot NX_2$ (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 436.
Amino-compounds, nutritive value of (v. STRUSIEWICZ), A., ii, 734.
aromatic, action of sulphites on (BUCHERER), A., i, 48; (BUCHERER and STOHMANN), A., i, 585.
Amino-derivatives, hydrofluorides of (WEINLAND and LEWKOWITZ), A., i, 518.
α-Amino-β-hydroxy-acids, synthesis of (ERLENMEYER; ERLENMEYER and BADE), A., i, 131.
Aminopyrine, detection of antipyrine in (BOURCET), A., ii, 561.
Amino-substances, amphoteric, union of, with carbon dioxide (SIEGFRIED), A., ii, 332.
Aminosulphonic acids, action of nitric acid on (ZINCKE), A., i, 486.
Ammonia, formation of, from its elements (HABER and VAN OORDT), A., ii, 159, 384, 814; (PERMAN), A., ii, 814.
synthetical preparation of (WESTDEUTSCHE THOMASPHOSPHATWERKE, G.M.B.H.), A., ii, 314.
electrolytic oxidation of (MÜLLER and SPITZER), A., ii, 242, 314; (TRAUBE and SCHÖNEWALD), A., ii, 242.
boiling point of (GIBBS), A., ii, 570.
density of (GUYE and PINTZA), A., ii, 506.
methods employed in preparing the tables of specific gravity of (FERGUSON), A., ii, 632.
decomposition of, at high temperatures (WHITE and MELVILLE), A., ii, 384.

Ammonia, liquid, physical properties of, as compared with water, and reactions in (FRANKLIN), A., ii, 581.
electrical conductivity of solutions of (FRANKLIN and KRAUS), A., ii, 298.
methylation of, by means of formaldehyde (ESCHWEILER; KOEPPEN), A., i, 328.
action of, on acetyl thiocyanate (DORAN and DIXON), T., 341; P., 77.
reaction of, with commercial calcium carbide (SALVADORI), A., i, 513.
action of, on carbon monoxide (JACKSON and NORTHALL-LAURIE), T., 433; P., 118.
action of, on carbonyl chloride (STUER), A., i, 579; (HANTZSCH and STUER), A., ii, 312.
action of, on sulphuryl chloride (STUER), A., i, 579; (HANTZSCH and STUER), A., ii, 312.
nitrification of, fixed by chabazite (WITHERS and FRAPS), A., ii, 111.
compounds of, with ketones (THOMAE), A., i, 509, 684, 718.
compounds of, with samarium chloride (MATIGNON and TRANNOY), A., ii, 165.
new process for detecting (TRILLAT and TURCHET), A., ii, 282.
detection of, in milk (TRILLAT and SAUTON), A., ii, 490.
estimation of (EFFRONT), A., ii, 60.
estimation of, in milk (BERG and SHERMAN), A., ii, 351.
estimation of, in vegetable products, beets, &c. (SELLIER), A., ii, 60.
estimation of, in potable waters (CAVALIER and ARTUS), A., ii, 609.
and proteid nitrogen, estimation of, in waters (EFFRONT), A., ii, 68.
Ammonia, *di*hydroxy-. See Nitroxyl.
Ammonio-metallic compounds. See Metalammoniums and under the separate Metals.
Ammonium, relation of, to the alkali metals (TUTTON), T., 1123; P., 177.
Ammonium salts, hydrolysis of (VELEY), T., 26.
action of magnesium alkyl haloids on (HOUBEN), A., i, 873.
expulsion of, after precipitation in their presence (JANNASCH), A., ii, 611.
estimation of, volumetrically, with sodium hypobromite (RUPP and RÖSSLER), A., ii, 418.
Ammonium cerium salts (WOLFF), A., ii, 457.
ferrous arsenate (DUNCAN), A., ii, 167.
*per*borate (BRUHAT and DUBOIS), A., ii, 246.
*per*carbonate, decomposition of (BILTZ and GAHL), A., ii, 586.
uranyl double carbonate (GIOLITTI and VECCHIARELLI), A., ii, 826.
vanadyl carbonate (KOPPEL, GOLDMANN, and KAUFMANN), A., ii, 594.
chloride, influence of, on colloidal ferric hydroxide (DUMANSKY), A., ii, 393.
cupric chloride, and water (MEERBURG), A., ii, 17.
dissociation of, in its analytical relations (SANTI), A., ii, 86.
action of, on potassium ferricyanide (MATUSCHEK), A., i, 422.
*di*chromate, preparation of (SEGALLE), A., ii, 707.
chromates (SCHREINEMAKERS), A., ii, 820.
antimonious haloids, complex (CAVEN), P., 187.
ruthenium haloids (GUTBIER and TRENKNER), A., ii, 463.
mercuric iodide (DUBOIN), A., ii, 637.
nitrate, polymorphism of (WALLERANT), A., ii, 161.
and thallous nitrate, mixed crystals of (WALLERANT), A., ii, 380.
ceric nitrate, electrolytic preparation of (PLANCHER and BARBIERI), A., ii, 250.
nitrite, decomposition of (BLANCHARD), A., ii, 237; (BILTZ and GAHL), A., ii, 585.
sodium bismuth nitrite (BALL), T., 761; P., 129.
magnesium and ammonium zinc selenates and sulphates, crystallographic study of (TUTTON), T., 1123; P., 177.
sulphate, impurities in (BARDACH), A., ii, 128.
titanium double sulphates (STÄHLER), A., ii, 596.
uranate, properties of (GIOLITTI), A., ii, 861.
Ammonium organic compounds, substituted, stereoisomerism of (JONES), T., 1721; P., 237.
Ammonium salts, constitution of (HANTZSCH and GRAF), A., i, 575; (HANTZSCH), A., i, 576; (CAIN), A., i, 747.
and oxonium salts (HANTZSCH), A., i, 605; (KEHRMANN and DE GOTTRAU), A., i, 670; (KEHRMANN), A., i, 930.

Ammonium bases, relation between the chemical constitution and physiological action of (SCHMIDT), A., i, 23; ii, 105.
pharmacology of (HILDEBRANDT), A., ii, 743.
quaternary (DECKER, GADOMSKA, and GIRARD), A., i, 469; (DECKER, BÜNZLY, v. FELLENBERG, KLAUSER, and WISLOCKI), A., i, 667.
of the "inert" bases, formation and decomposition of (DECKER, GADOMSKA, SANDBERG, and STAVROLOPOULOS), A., i, 374.
ψ-Ammonium bases, constitution of, with reference to the alkaloids and the products these yield by transformation (GADAMER), A., i, 368.
condensation of, with hydroxylamine and *as*-dimethyl-*p*-phenylenediamine (GADAMER), A., i, 383.
Ammonium thiocyanate, injurious action of, as manure (HASELHOFF), A., ii, 196.
Amygdalin from *Sambucus nigra* (GUIGNARD), A., ii, 604; (BOURQUELOT and DANJOU), A., ii, 605; (GUIGNARD and HOUDAS), A., ii, 648.
Amyl alcohol, distribution of soluble substances between water and (HERZ and FISCHER), A., ii, 79.
tert.-**Amyl alcohol**, latent heat of evaporation of (BROWN), T., 269; P., 75.
Amyl alcohols. See also *tert.*-Butylcarbinol and Methylpropylcarbinol.
*iso***Amylacetoacetic acid**, amino-, ethyl ester (GUARESCHI), A., i, 823.
Amylamine, ε-chloro-, and *N*-benzoyl derivative, preparation and reactions of (v. BRAUN and STEINDORFF), A., i, 206, 596; (v. BRAUN and MÜLLER), A., i, 634.
ε-halogen derivatives of, and their benzoyl derivatives (v. BRAUN and STEINDORFF), A., i, 206.
*iso***Amylamine** hydrochloride, primary, and ammonia, chemical equilibrium in the system (BIDET), A., i, 686.
9-*iso***Amylanthrone** bromide and chloride, reactions of (JÜNGERMANN), A., i, 795.
Amylase, action of amino-acids on (EFFRONT), A., i, 107.
1-*iso***Amylconhydrine** (SCHOLTZ and PAWLICKI), A., i, 473.
Amylene glycols. See Pentane-βδ-diol and Dimethyltrimethylene glycol.
Amyl β-methyloctyl ketone (BOUVEAULT and LOCQUIN), A., i, 19.
Amylocellulose (MAQUENNE and ROUX), A., i, 511.
diastasic formation of (WOLFF and FERNBACH), A., i, 312.
reversion of, into starch (ROUX), A., i, 262.
and starch coagulum, separation of (WOLFF), A., ii, 866.
Amyloid (NEUBERG), A., i, 162.
Amylolytic action, influence of certain amphoteric electrolytes on (FORD and GUTHRIE), P., 296.
Amylopectin and **Amylopectinase** (MAQUENNE and ROUX), A., i, 511.
ψ-*iso***Amylthiocarbamide** hydrobromide (WHEELER and BRISTOL), A., i, 482.
*iso***Amylthiolbenzylacetophenone** (RUHEMANN), T., 463.
*iso***Amylthiolbenzyl-acetylacetone**, **-benzoylacetone**, and **-benzylideneacetone** (RUHEMANN), T., 21.
Anæmia, pernicious (GULLAND and GOODALL), A., ii, 102.
Anæsthesia, physical chemistry of (MOORE and ROAF), A., ii, 272.
local, produced by alypin (IMPENS), A., ii, 842.
by injections of magnesium salts (MELTZER and AUER), A., ii, 743.
Analysis, uniformity in (REPORT OF COMMITTEE), A., ii, 197.
new laboratory apparatus for (KIPPENBERGER), A., ii, 608.
testing glass vessels as to neutrality (BARONI), A., ii, 198.
use of the micro-balance in (JÄNECKE), A., ii, 66; (BRILL), A., ii, 198.
electrolytic, methods of (PUSHIN and TRECHZINSKY), A., ii, 607.
with a rotating anode (ASHBROOK), A., ii, 64; (SMITH, WEST, and KOLLOCK), A., ii, 198.
use of the rotating anode and mercury electrode in (KOLLOCK and SMITH), A., ii, 859.
elementary, simplified (DENNSTEDT), A., ii, 202, 651; (WEIL), A., ii, 202.
indirect, in multi-component systems (BANCROFT), A., ii, 685.
organic, sodium peroxide in (NEUMANN and MEINERTZ), A., ii, 59; (KONEK VON NORWALL and ZÖHLS), A., ii, 60; (PRINGSHEIM and GIBSON), A., ii, 609.
ultimate organic (HERMANN), A., ii, 767.
qualitative, method for determining the presence of certain metallic oxides in (TICHBORNE), A., ii, 556.
quantitative, palladium-hydrogen as a reducing agent in (CHAPMAN), A., ii, 58.

Analysis, quantitative, use of persulphates in (v. KNORRE), A., ii, 285.
volumetric, uses of iodic acid in (SCHUMACHER and FEDER), A., ii, 856.
use of titanium trichloride in (KNECHT and HIBBERT), A., ii, 872.
determination of the neutralisation point by conductivity measurement (KÜSTER, GRÜTERS, and GEIBEL), A., ii, 55.
preparation of solutions for (WORDEN and MOTION), A., ii, 280.
the question of uniform standardising substances for (SÖRENSEN), A., ii, 414.
standardising of normal acids for (SEBELIEN), A., ii, 551.
table for the preparation of normal solutions of hydrochloric acid according to the density (KÜSTER and MÜNCH), A., ii, 198.
standardisation of potassium permanganate solutions by means of silver (HOPFGARTNER), A., ii, 484.
standardisation of normal solutions for (SCHOLTZ), A., ii, 57.
See also Acidimetry and Iodometry.
Analytical results, statement of (FRESENIUS), A., ii, 197.
Anethoglycol. See γ-*p*-Methoxyphenylpropane-βγ-diol.
Anethole, latent heat of vaporisation of (LUGININ), A., ii, 801.
dibromide, oxidation of (HOERING), A., i, 902.
p-**Anethole** (VERLEY), A., i, 127.
Anetholes, *o*- and *p*- (HELL and HOFMANN), A., i, 435.
Anethole ketone and **oxide** (HOERING), A., i, 593.
Anethole oxide and its reactions (HOERING), A., i, 903.
Anhydrides, heats of combustion and formation of (THOMSEN), A., ii, 573.
of dibasic acids, reduction of (BLANC), A., i, 115.
of saturated dibasic acids and Baeyer's tension theory (VOERMAN), A., i, 13.
Anhydrite from Texas (SCHALLER), A., ii, 724.
Anhydroacetonebenzil, preparation and derivatives of (JAPP and KNOX), T., 673; P., 152.
Anhydro-3-amino-4-benzoylaminotriphenylmethane. See 2-Phenyl-5-diphenylmethylbenziminazole.
Anhydrocarboxylic acids, action of aniline on (BERTRAM), A., i, 465.
Anhydro-γ-hydroxypropylphthalamic acid and its additive salts and nitrosoamine (GABRIEL), A., i, 649, 650.
Anil, bromo- and chloro-. See *p*-Benzoquinone, *tetra*bromo- and *tetra*chloro-.
Anilides, hydrofluorides of (WEINLAND and LEWKOWITZ), A., i, 518.
Anilidic acids (BERTRAM), A., i, 465.
Aniline, electrolysis of acid solutions of (GILCHRIST), A., i, 45.
limits of coupling of, with diazobenzene (VIGNON), A., i, 250.
influence of temperature on the action of acetyl thiocyanate on (DORAN and DIXON), T., 333; P., 77.
action of, on anhydrocarboxylic acids (BERTRAM), A., i, 465.
action of, on ethylcarbylamine dibromide (GUILLEMARD), A., i, 518.
and its hydrochloride, action of sulphur on (HINSBERG), A., i, 339, 518; (HOFMANN), A., i, 427.
acetyl derivative. See Acetanilide.
benzoyl derivative. See Benzanilide.
cyanoformyl derivative (DIECKMANN and KÄMMERER), A., i, 874.
formyl derivative, crystalline and liquid modifications of (ORLOFF), A., i, 643.
magnesium haloid derivatives, action of, on ethyl chloroacetates (BODROUX), A., i, 585.
hydrochloride, double salts with palladous bromide and chloride (GUTBIER), A., i, 584.
detection of small quantities of (HOLLEMAN), A., i, 272.
Aniline, *p*-bromo-, benzoyl and dibromobutyryl derivatives of (AUTENRIETH and PRETZELL), A., i, 629.
2:5-*di*chloro-, and its salts, benzoyl derivative, and thiocarbamide (NOELTING and KOPP), A., i, 872.
3:5-*di*chloro-4-bromo- (FLÜRSCHEIM), A., i, 615.
2:5-*di*chloro-4:6-*di*bromo- (NOELTING and KOPP), A., i, 873.
o- and *p*-iodo-, preparation of (v. BAEYER), A., i, 767.
p-nitro-, diazotised, stability of (SCHWALBE), A., i, 952.
thio- (m.p. 58°), and its salts and diacetyl derivative, and *di*thio- (HINSBERG), A., i, 339, 518; (HOFMANN), A., i, 427.
Aniline colouring matters, oxidation of, on the fibre (KIRPITSCHNIKOFF), A., i, 540.

Aniline-red. See Magenta.
Aniline-*p*-sulphonic acid (*sulphanilic acid*), solubility of, in water (DOLIŃSKI), A., i, 524.
2:5-*di*chloro-, and its salts (NOELTING and KOPP), A., i, 873.
Anilinoacetic acid. See Phenylglycine.
Anilinobenzeneazobenzene-*p*-sulphonic acid. See Orange IV.
Anilinobenzylacetophenone (MAYER), A., i, 214.
Anilinobenzyl-lævulic acid (MAYER), A., i, 357.
Anilino-bromo- and -chloro-maleic anhydrides and their anils (SALMONY and SIMONIS), A., i, 632.
α-Anilinobutylbenzene and its additive salts (BUSCH and RINCK), A., i, 519.
Anilinodihydrouracil (GABRIEL), A., i, 266.
Anilinodiphenyl-methane and **-ethane** and their additive salts (BUSCH and RINCK), A., i, 519.
α-Anilinoethylbenzene, reactions of (BUSCH and RINCK), A., i, 519.
β-Anilino-α-ethylpropionanilide (BLAISE and LUTTRINGER), A., i, 627.
2-Anilino-2-ethylthiolpyrimidine and its hydrochloride (WHEELER and BRISTOL), A., i, 485.
2-Anilino*cyclo*hexanol and its hydrochloride (BRUNEL), A., i, 869.
α-Anilino*iso*hexylbenzene and its additive salts (BUSCH and RINCK), A., i, 519.
6-Anilinoindazole, 5:7-*di*nitro- (ZINCKE and KUCHENBECKER), A., i, 488.
β-Anilino-ketones from fatty ketones, properties of (MAYER), A., i, 214, 357, 791.
6-Anilino-3-methoxybenzoic acid (ULLMANN and KIPPER), A., i, 597.
6-Anilino-9-methyl-αβ-naphthaphenazine, 8-amino- (ULLMANN and ANKERSMIT), A., i, 554.
2-Anilino-4 methylthiazole, acetyl derivative (YOUNG and CROOKES), P., 308.
4-Anilino-2-methylthiolpyrimidine, 6-amino-, and 5-*p*-*di*bromo-6-amino- (JOHNSON and JOHNS), A., i, 837.
5-Anilino-1-β-naphthyl-3-methylpyrazole and its *N*-benzoyl and -methyl derivatives (MICHAELIS and DANZFUSS), A., i, 481.
8-Anilinoparaxanthine (BOEHRINGER & SÖHNE), A., i, 230.
2-Anilinophenetole, 3:5-*di*nitro- (BLANKSMA), A., i, 431.
1-Anilino-5-phenoxyanthraquinone (FARBENFABRIKEN VORM. F. BAYER & CO.), A., i, 798.
β-Anilino-β-phenylethyl alkyl ketones (MAYER), A., i, 215, 357.
Anilinophenylfluorene (KLIEGL), A., i, 187.
2-Anilinophenylglycine, 5-nitro- (REISSERT and GOLL), A., i, 247.
γ-Anilino-α-phenylimino-Δβ-propylene, β-bromo- and β-chloro-, hydrobromide and hydrochloride of (DIECKMANN and PLATZ), A., i, 117.
Anilinophenyl-α-naphthylmethane and its hydrochloride (BUSCH and RINCK), A., i, 520.
Anilinophenylnitroethane (MAYER), A., i, 357.
γ-Anilino-Δβ-propene-α-al, β-bromo- and β-chloro- (DIECKMANN and PLATZ), A., i, 117.
α-Anilinopropylbenzene and its additive salts (BUSCH and RINCK), A., i, 519.
α-Anilino-α:*p-iso*propylphenylethane and its hydrochloride (BUSCH and RINCK), A., i, 520.
β-Anilino-α-propylpropionanilide (BLAISE and LUTTRINGER), A., i, 628.
2-Anilinopyrimidine, 6-chloro-5-bromo- (WHEELER, BRISTOL, and JOHNSON), A., i, 483.
8-Anilinotheophylline (BOEHRINGER & SÖHNE), A., i, 231.
β-Anilinotricarballylic acid and its salts (SCHROETER, SCHWAMBORN, and STASSEN), A., i, 819.
***endo*Anilo-diphenyl-** and **-di-*p*-tolyltriazoles** and their salts (MERCK), A., i, 949.
Anilopyrine. See 2:5-Phenylimino-1-phenyl-2:3-dimethylpyrazole.
***endo*Anilotriphenyltriazole** and its salts (MERCK), A., i, 949.
Animal cells, staining reactions of (MOSSE), A., ii, 182.
lactase. See Lactase.
liquids, acidimetry of (FRIEDENTHAL), A., ii, 212.
organism. See Organism.
tissues. See Tissues.
Animals, source of substances containing sulphur in (WOHLGEMUTH), A., ii, 182.
receptivity of cells in normal and immunised (JACOBY), A., ii, 47.
agricultural, feeding and metabolism of (TANGL, WEISER, ZAITSCHEK, and KORBULY), A., ii, 757.
fresh-water, toxicity of sea water on (OSTWALD), A., ii, 272.
growing, assimilation of calcium and phosphoric acid from various calcium phosphates by (KÖHLER, HONCAMP, JUST, VOLHARD, POPP, and ZAHN), A., ii, 265; (PASSON), A., ii, 414.

Animals, lower, gas exchange in some, and its dependence on partial pressure of oxygen (THUNBERG), A., ii, 728.
warm-blooded, action of alcohol on the heart of (LOEB), A., ii, 471.
Anisaldehyde mono- and di-hydrochlorides and monohydrobromide (VORLÄNDER and SIEBERT), A., i, 792.
o-**Anisamine**. See *o*-Methoxybenzylamine.
Anisic acid, reduction products of (LUMSDEN), T., 87; P., 14.
p-**Anisidine**, 3:5-*di*nitro-, and its *N*-acetyl derivative (MELDOLA and STEPHENS), T., 1206; P., 219.
Anisidines, *o*- and *p*-*di*nitro-, and their products of diazotisation (MELDOLA and STEPHENS), T., 1199; P., 218.
Anisidinodiphenylmethanes, *o*- and *p*-, and their additive salts (BUSCH and RINCK), A., i, 520.
Anisildisemicarbazone and **Anisoinsemicarbazone** (BILTZ and ARND), A., i, 675.
Anisole, formation of (GRAEBE), A., i, 699.
dielectric constants of, dissolved in benzene and *m*-xylene (PHILIP and HAYNES), T., 1001; P., 200.
Anisole, *m*-bromo-, and its reaction with benzoyl chloride (DIELS and BUNZL), A., i, 432.
p-bromo-, action of sulphur on the organo-magnesium derivatives of (TABOURY), A., i, 644.
*tri*bromo- and *tri*chloro-, the Zeisel reaction on (BOYD and PITMAN), T., 1255; P., 221.
p-iodo-. See Isoform.
2-iodo-4:5-*di*nitro- (MELDOLA and STEPHENS), T., 1202; P., 218.
*di*nitro-derivatives, specific gravities of (HOLLEMAN), A., i, 42.
s-*di*nitro-, reduction of (BLANKSMA), A., i, 431.
Anisolesulphon-acetonitriles and **-ethenylaminoximes**, *o*- and *p*- (TRÖGER and VOLKMER), A., i, 356.
Anisolesulphondialkylacetonitriles, *o*- and *p*- (TRÖGER and VASTERLING), A., i, 871.
p-**Anisolesulphondibenzylthioacetamide** (TRÖGER and VASTERLING), A., i, 872.
Anisylacetone and its oximes (HOERING), A., i, 903.
o-**Anisylazoformaldoxime** (BUSCH and WOLBRING), A., i, 494.
p-**Anisyldiguanide salts** (A. and L. LUMIÈRE and PERRIN), A., i, 250.
Anisylidene-acetone and **-acetophenone**, ψ-nitrosites and α-nitro-derivatives of (WIELAND and BLOCH), A., i, 707.
Anisylideneacetophenone hydrochlorides and dipicrate (VORLÄNDER, SIEBERT, and ROLLE), A., i, 793.
Anisylidenenitro-ethane and **-methane** (KNOEVENAGEL and WALTER), A., i, 66.
Anisylidenepinacolin and its dipicrate (VORLÄNDER and SIEBERT), A., i, 793.
Anisylidenethujone (HALLER), A., i, 602.
4-Anisyl-1-methyl-3-*cyclo*-hexanol and **-hexanone** (HALLER and MARCH), A., i, 771.
5-Anisyl-3-pyrrolone, 4-amino- and 4-nitro- (WIELAND and BLOCH), A., i, 707.
p-**Anisylthiosulphonic acid**, *p*-phenylenediamine salt (TRÖGER and VOLKMER), A., i, 89.
Anniversary dinner, P., 106.
Annual General Meeting, T., 535; P., 99.
Anodes. See under Electrochemistry.
Anthracene (LUTHER and WEIGERT), A., ii, 785.
melting point curve for mixtures of picric acid and (KREMANN), A., i, 270.
mesophenyl derivatives of (LIEBERMANN and LINDENBAUM), A., i, 522.
Anthracene, amino-. See Anthramine.
bromo-derivatives (KAUFLER and IMHOFF), A., i, 124.
10-bromo-1:9-*di*hydroxy- (LIEBERMANN and MAMLOCK), A., i, 522.
1-hydroxy-. See Anthrol.
9-hydroxy-. See Anthranol.
Anthracene series, syntheses in the (HALLER and GUYOT), A., i, 188, 270; (GUYOT and CATEL), A., i, 516.
syntheses in the, and new dyes (BALLY), A., i, 237.
Anthrachrysone, dialkyl ethers, amino-, bromo-, and nitro-derivatives of (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 146.
Anthragallol trimethyl ether (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 654.
Anthragallolamide (2-*amino*-1:3-di*hydroxyanthraquinone*) and its derivatives (BÖCK), A., i, 531.
Anthraglucoside from Curaçoa aloes (TSCHIRCH and HOFFBAUER), A., i, 913.
1-Anthramine and its hydrochloride and acetyl derivative (DIENEL), A., i, 767.

Anthranil, constitution of (HELLER), A., i, 130; (KERNOT and PETRONE), A., i, 284.

Anthranilamide, 4-nitro-, *N*-acetyl derivative of (BOGERT and STEINER), A., i, 946.

6-nitro-, *N*-acetyl derivative of (BOGERT and SEIL), A., i, 945.

Anthranilic acid (*o-aminobenzoic acid*), action of ethyl benzoylacetate on (v. NIEMENTOWSKI), A., i, 611.

condensation of, with formaldehyde (BADISCHE ANILIN- & SODA-FABRIK), A., i, 437.

condensation of, with ethyl malonate (v. POLLACK), A., i, 353.

reduction of (LANGGUTH), A., i, 593.

derivatives of (v. PAWLEWSKI), A., i, 437.

N-cinnamoyl derivative (REINICKE), A., i, 787.

Anthranilic acid, 6-nitro-, and its *N*-acetyl derivative, and their reactions (BOGERT and CHAMBERS), A., i, 612.

Anthranol, 10-bromo- (LIEBERMANN and MAMLOCK), A., i, 521.

1-hydroxy- (LIEBERMANN and MAMLOCK), A., i, 531.

iodo-hydriodo-derivatives (LIEBERMANN and MAMLOCK), A., i, 531.

Anthraquinone, action of a mixture of glacial acetic acid and hydriodic acid on (LAGODZINSKI), A., i, 601.

derivatives, aryl ethers of (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 797.

azine derivatives (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 720, 779.

methoxy-derivatives (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 709.

iodo-hydriodo-compounds of non-nitrogenous derivatives of (LIEBERMANN and MAMLOCK), A., i, 531.

Anthraquinone, 2-*mono*- and 1:5-*di*amino-, and their nitroamines, and their bromo- and nitro-derivatives, and 1:2:3-*tri*amino- (SCHOLL, SCHNEIDER, and EBERLE), A., i, 70.

2:3-*di*amino-, and its sulphate and diacetyl derivative and reactions (SCHOLL and KAČER), A., i, 88.

2:6-*di*amino- and *mono*- and 2:6-*di*bromo- (KAUFLER and IMHOFF), A., i, 124.

3-amino-1-hydroxy-, 3-nitro-1-hydroxy-, and 3-nitro-2-nitroamino-1-hydroxy- (SCHOLL, SCHNEIDER, and EBERLE), A., i, 70.

2-amino-1:3-*di*hydroxy-. See Anthragallolamide.

Anthraquinone, 2-bromo-α-amino- and 2-bromo-5-nitro-α-amino- (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 910.

1:4-*di*bromo-2-amino- (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 797.

2:6-*di*- and 2:4:6:8-*tetra*-bromo-1:5-*di*amino-, and their tetra-acetyl derivatives (SCHOLL and BERBLINGER), A., i, 88; (SCHOLL and KRIEGER), A., i, 145.

2:7-*di*bromo-1:6-*di*amino-, 2:7-*di*bromo-1:4:6:9-*tetra*amino-, and its tetrabenzoyl derivative, and 2:7-*di*bromo-4:9-*di*nitro-1:6-*di*nitroamino- (SCHOLL and KRIEGER), A., i, 145.

2:7-*di*bromo-4:9-*di*nitro-1:6-*di*nitroamino-, action of aromatic bases on the nitroamino-groups of (SCHOLL and KRIEGER), A., i, 145.

hydroxy-derivatives, methyl ethers of (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 362.

and their sulphonic acids, connection between the constitution and the colour and dyeing power with mordants of the (v. GEORGIEVICS), A., i, 447.

1:2-*di*hydroxy-. See Alizarin.

1:8-*di*hydroxy-. See Chrysazin.

1:2:3-*tri*hydroxy-. See Anthragallol.

1:2:5-*tri*hydroxy-, and its triacetyl derivative (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 532.

1:3:5:7-*tetra*hydroxy-. See Anthrachrysone.

2-nitro- (KLIEGL), A., i, 187.

nitroamino-derivatives (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 447.

Anthraquinone series, azines of, compounds of, with formaldehyde (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 946.

diazonium salts of the (KAČER and SCHOLL), A., i, 102.

photodynamic and optical behaviour of the (v. TAPPEINER, JODLBAUER, and LEHMANN), A., ii, 602.

Anthraquinoneazine, chloro- (BADISCHE ANILIN- & SODA-FABRIK), A., i, 158.

Anthraquinone-1:6-bisazoxydimethylaniline, 2:7-*di*bromo-4:9-*di*nitro- (SCHOLL and KRIEGER), A., i, 146.

Anthraquinonedioxamic acids, *di*nitro-*di*amino- (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 653.

Anthraquinone-2:6-dioxydiacetic acid, 4:8-*di*hydroxy- (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 649.

Anthraquinone-1:5- and **-1:8-disulphonic acids** (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 361.

Anthraquinoneoxyacetic acids (*anthraquinoneglycollic acids*) and their esters and salts (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 648.

Anthraquinone-2-sulphon*di*chloroamide (CHATTAWAY), T., 157; P., 7.

Anthraquinonesulphonic acid, amino-*di*hydroxy- (BADISCHE ANILIN- & SODA-FABRIK), A., i, 654.

Anthraquinone-5-sulphonic acid, 1-hydroxy- (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 653.

Anthraquinone-7-sulphonic acid, 1-amino-4-hydroxy-, and its esters (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 146.

Anthraquinonesulphonic acids, elimination of the sulpho-group from (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 911.

1-Anthrol and its acetyl derivative and methyl and ethyl ethers (DIENEL), A., i, 767.

Antiarol (*5-hydroxy-1:2:3-trimethoxybenzene*) (GRAEBE and SUTER), A., i, 703.

Anti-catalase in animal tissues (BATTELLI and STERN), A., ii, 406.

Anti-ferments (BEITZKE and NEUBERG), A., ii, 336.

Antimony, so-called explosive (COHEN, COLLINS, and STRENGERS), A., ii, 170; (COHEN and STRENGERS), A., ii, 532.

Antimony alloys with bismuth (HÜTTNER and TAMMANN), A., ii, 327.

with zinc (MÖNKEMEYER), A., ii, 171.

Antimony, halogen double salts of quadrivalent (WEINLAND and SCHMID), A., ii, 258.

ammonium haloids, complex (CAVEN), P., 187.

hydride (*stibine*), interference of mercuric chloride with the formation of (VITALI), A., ii, 354.

decomposition of (STOCK), A., ii, 96.

Metachloroantimonic acid and its salts (WEINLAND and SCHMID), A., ii, 326.

Antimony sulphide, fusibility of mixtures of, with cuprous sulphide and mercuric sulphide (PÉLABON), A., ii, 435.

Antimony organic salts (WEINLAND and SCHMID), A., ii, 258.

Antimony, analysis of, electrolytically (LAW and PERKIN), A., ii, 767.

Antimony, detection and estimation of, in presence of organic matter (NORTON and KOCH), A., ii, 858.

estimation of, electrolytically, and separation of, from tin (FISCHER), A., ii, 120.

estimation of, as sulphide (MULLER), A., ii, 118; (VORTMANN and METZL), A., ii, 655.

separation of, from tin (VORTMANN and METZL), A., ii, 655.

Anti-oxidising agents (A. and L. LUMIÈRE and SEYEWETZ), A., ii, 379.

Antipepsin (SCHWARZ), A., ii, 731.

Anti-precipitins and precipitins (BERMBACH), A., ii, 407, 730.

Antipyrine (*1-phenyl-2-3-dimethylpyrazolone*), diguanide from (A. and L. LUMIÈRE and PERRIN), A., i, 250.

compound of, with mercuric oxide (ASTRE and VILLE), A., i, 670.

detection of, in aminopyrine (BOURCET), A., ii, 561.

detection and estimation of, in pyramidone (PATEIN), A., ii, 658.

and pyramidone, estimation of, volumetrically, in presence of each other (PÉGURIER), A., ii, 871.

3-Antipyrine. See 1-Phenyl-2:5-dimethyl-2:3-oxypyrazole.

ψ-3-Antipyrine. See 3-Methoxy-1-phenyl-5-methylpyrazole.

Antipyrylsemicarbazide and its derivatives (A. and L. LUMIÈRE and BARBIER), A., i, 475.

Antiseptic, isoform a new (HEILE; WEIK), A., ii, 847.

Antitoxic action of bivalent cations, the so-called (OSBORNE), A., ii, 746.

Antitoxins. See under Toxins.

Anti-typhoid inoculation, blood changes following (LEISHMAN, HARRISON, SMALLMAN, and TULLOCH), A., ii, 599.

Apigenin, a second synthesis of (BREGER and v. KOSTANECKI), A., i, 366.

Apiole α-nitrosites (RIMINI), A., i, 199.

***iso*Apioles**, compounds of, with *s*-trinitrobenzene and picryl chloride (BRUNI and TORNANI), A., i, 269.

Apium graveolens. See Celery.

Apo-. See under the Substance to which apo is prefixed.

Aporeine from *Papaver dubium* (PAVESI), A., i, 368.

Apples, bruised, cause of the presence of abnormal amounts of starch in (WARCOLLIER), A., ii, 753.

Arabinose anilide (HERMANN), A., i, 327.

***l*-Arabinosediphenylhydrazone** (TOLLENS and MAURENBRECHER), A., i, 262.

Arabinose-*d*-phenylamylhydrazones, *d*- and *l*- (NEUBERG and FEDERER), A., i, 299.
Arachine and its additive salts from earth-nut (MOOSER), A., i, 79.
Arachis. See Earthnut.
Arc lamp. See under Electrochemistry.
Archil, detection of (TOLMAN), A., ii, 215.
Arginine in urine during phosphorus poisoning (WOHLGEMUTH), A., ii, 338, 470.
effect of feeding with material rich in (ORGLMEISTER), A., ii, 734.
metabolism of (THOMPSON), A., ii, 268, 839.
compound of, with copper nitrate (SCHENCK), A., i, 28.
picrolonate (STEUDEL), A., i, 461.
estimation of, with permanganate (ORGLMEISTER), A., ii, 777.
Arginine, methyl ester, hydrochloride of (FISCHER and SUZUKI), A., i, 121.
***i*-Arginine** (CATHCART), A., ii, 267, 461.
Argon, atomic weight of, deduced from its density (GUYE), A., ii, 442.
Arnisterol (*arnidiol*) and its diacyl derivative and phenylurethane (KLOBB), A., i, 594.
Aromatic compounds, ultra-violet absorption spectra of (BALY and COLLIE), T., 1332; P., ·203; (BALY and EWBANK), T., 1347, 1355; P., 203, 210.
laws of substitution in (FLÜRSCHEIM), A., i, 614.
replacement of atoms or groups of atoms by hydrogen in, during reduction (BLANKSMA), A., i, 761.
action of ammonium nitrite and ammonium nitrate (or of nascent nitrogen and nitrous oxide) on (VAUBEL), A., i, 189.
Arrhenalic acid. See Methylarsonic acid.
Arrow poison. See Poison.
Arsenated monetites, artificial production of (DE SCHULTEN), A., ii, 174.
Arsenic, yellow, preparation of (STOCK and SIEBERT), A., ii, 25, 315.
non-existence of, in organs and tissues (KUNKEL), A., ii, 542.
localisation of, in cases of poisoning (DENIGÈS), A., ii, 745.
Arsenic *tri*hydride (*arsine*), interference of mercuric chloride with the formation of (VITALI), A., ii, 354.
catalytic decomposition of (LOCKEMANN), A., ii, 386.
Arsenic:—
arsenious oxide (*arsenious anhydride*), preparation of vitreous (SOUHEUR), A., ii, 633.
light emitted by crystals of (GERNEZ), A., ii, 365; (GUINCHANT), A., ii, 366.
theory of the velocity of solution of (BRUNNER), A., ii, 386.
arsenic oxide (*arsenic* pent*oxide*; *arsenic anhydride*), interaction of, with hydrogen sulphide in presence of hydrochloric acid (USHER and TRAVERS), T., 1370; P., 223.
use of, in the catalysis of sulphur trioxide (BERL), A., ii, 315.
arsenic acid, reaction of, with potassium iodide near the equilibrium (BRAY), A., ii, 690.
*tri*sulphides (*arsenious sulphides*), red and yellow (WINTER), A., ii, 245.
*tri*sulphide, colloidal, physical and chemical properties of (LINDER and PICTON), T., 1907; P., 241.
Arsenic organic compounds (DEHN), A., i, 184; (MANNHEIM), A., i, 758.
Arsines, primary (DEHN), A., i, 184.
Arsenic, examination of drugs for (NAYLOR and CHAPPEL), A., ii, 117.
Bettendorf's test for (LOBELLO), A., ii, 763.
detection of, by means of the Marsh apparatus (LOCKEMANN), A., ii, 353.
evolution of hydrogen in Marsh's test for (MAI and HURT), A., ii, 61.
detection and estimation of, in presence of organic matter (NORTON and KOCH), A., ii, 858.
detection of, in the ashes of cremated bodies (MAI), A., ii, 61.
estimation of (COWLEY and CATFORD), A., ii, 117.
estimation of small quantities of, electrolytically (MAI and HURT), A., ii, 284; (FRERICHS and RODENBERG), A., ii, 651.
estimation of, as magnesium pyroarsenate (VIRGILI), A., ii, 652, 858.
estimation of, in fuels (MCGOWAN and FLORIS), A., ii, 354.
estimation of, in toxicology (MAI), A., ii, 763.
separation of (CANTONI and CHAUTEMS), A., ii, 480.
separation of, from molybdenum and vanadium (FRIEDHEIM, DECKER, and DIEM), A., ii, 764.
Arsines. See under Arsenic.
Artemisin, decomposition products of a derivative of (BERTOLO), A. i, 224.

*iso***Artemisin** (*δ-hydroxysantonin*) and its phenylhydrazone (WEDEKIND and KOCH), A., i, 529.

Artemisone, *iso***Artemisone**, and **Artemisonic acid** and its salts (BERTOLO and RANFALDI), A., i, 897.

Arteries, action of chloroform on the (SCHÄFER and SCHARLIEB), A., ii, 105.

Artinite from the asbestos mines of the Lanterna Valley (BRUGNATELLI), A., ii, 173.

Artocarpus integrifolia, cyanomaclurin from (PERKIN), T., 715; P., 160.

2-Arylalkylamino-5-methyl-4:5-dihydrothiazoles, oxidation and hydrolysis of (YOUNG and CROOKES), P., 308.

Aryldiazonium salts, action of cuprous chloride on (ULLMANN and FRENTZEL), A., i, 308.

β-Arylhydroxylamines, formation of, by the electrochemical reduction of aromatic nitro-compounds (BRAND), A., i, 770.

Aryloxybenzoic acids (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 780.

and their conversion into xanthones (ULLMANN and ZLOKASOFF), A., i, 597.

Arylsulphonacetic acids, amides, nitriles, and thioamides of (TRÖGER and HILLE), A., i, 336.

Arylsulphonacetonitriles, action of alkyl haloids on the sodium derivatives of (TRÖGER and VASTERLING), A., i, 870.

formation of additive compounds from hydroxylamine and (TRÖGER and VOLKMER), A., i, 356.

Arylsulphonamides, aromatic, nitration of (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 639.

Arylsulphonyldiazoimides, properties and reactions of (MORGAN and MICKLETHWAIT), T., 73, 921, 1304; P., 8, 179, 222, 303; discussion, P., 180.

Arylthiosulphonacetoacetic acids, ethyl esters, action of phenylhydrazine on (TRÖGER and VOLKMER), A., i, 89.

Asaprol, detection of (LEFFMANN), A., ii, 864.

Ash analysis, separation of iron and aluminium from manganese, calcium, and magnesium in (KASCHINSKY), A., ii, 423.

See also Plant ash.

Asparagine, chemical changes attending the aërobic bacterial fermentation of (ADENEY), A., ii, 340.

acyl derivatives of (FISCHER and KOENIGS), A., i, 31.

Asparaginimide. See 2:5-Diketopiperazine-3:6-diacetamide.

Aspartic acid, amides and chlorides (FISCHER and KOENIGS), A., i, 31.

Aspergillus niger, composition of the proteid of (ABDERHALDEN and RONA), A., i, 954.

See also *Sterigmatocystis nigra*.

Asphalt, apparatus for determining the melting point of (BAUER), A., ii, 863.

Aspicilic acid and **Aspicilin** (HESSE), A., i, 140.

Assimilation, processes of (H. v. EULER; H. and A. v. EULER), A., ii, 343.

Association. See Affinity.

Atisine from *Aconitum heterophyllum* (DUNSTAN and HENRY), T., 1651; P., 235.

Atmosphere, chemical and geological history of the (STEVENSON), A., ii, 239.

Atmospheric air, open and underground, radioactivity of (DADOURIAN), A., i, 132.

in high latitudes, radioactivity of (SIMPSON), A., ii, 662.

ions in (LANGEVIN), A., ii, 141.

cause of the ionisation of, in contact with phosphorus (MEYER and MÜLLER), A., ii, 141.

registration of the ionisation of (LANGEVIN and MOULIN), A., ii, 141.

registration of the ionisation of, by means of falling water (NORDMANN), A., ii, 227.

specific heat of, at high temperatures (HOLBORN and AUSTIN), A., ii, 228.

coefficient of expansion of (JAQUEROD and PERROT), A., ii, 507.

liquid, action of, on the life of seeds (BECQUEREL), A., ii, 604.

combustible gaseous carbon compounds in (WOLPERT), A., ii, 160.

tension of carbon dioxide in (KROGH), A., ii, 27.

in and around Halle, radioactive properties of (SCHENK), A., ii, 432.

of Kew, variations in the amount of carbon dioxide in the, during the years 1898–1901 (BROWN and ESCOMBE), A., ii, 815.

of towns, presence of formaldehyde in the (TRILLAT), A., i, 325.

detection of traces of carbon monoxide in (DEJUST), A., ii, 453.

confined, estimation of carbon monoxide in (LÉVY and PÉCOUL), A., ii, 203.

estimation of carbon dioxide in (MACKIE), A., ii, 355.

Atmospheric air, estimation of carbon dioxide in, by the rate of its absorption by a free surface of a solution of an alkali hydroxide (BROWN and ESCOMBE), A., ii, 858.
determination of the amount of helium and neon in (RAMSAY), A., ii, 817.
Atomic theory and stoïchiometrical laws (HENRY), A., ii, 81; (NASINI), A., ii, 514.
Atomic weight and secondary radiation (MCCLELLAND), A., ii, 495, 496.
relation of specific heat to, in elements and compounds (TILDEN), T., 551; P., 104.
of argon, carbon, chlorine, hydrogen, nitrogen, and sulphur, deduced from their densities (GUYE), A., ii, 442.
of cadmium (BAXTER and HINES), A., ii, 321.
of carbon and glucinum (PARSONS), A., ii, 710.
of chlorine (DIXON and EDGAR), A., ii, 696.
of chlorine and sodium (RICHARDS and WELLS), A., ii, 450.
of gadolinium (URBAIN), A., ii, 250.
of hydrogen and nitrogen (LEDUC), A., ii, 310.
of iodine (KÖTHNER and AEUER), A., ii, 81, 156; (BAXTER), A., ii, 81, 579; (LADENBURG; KÖTHNER), A., ii, 310.
of nitrogen (GRAY), T., 1601; P., 156; (SCOTT), P., 309; (RAYLEIGH), A., ii, 232; (GUYE), A., ii, 442; (GUYE and PINTZA), A., ii, 506; (HINRICHS), A., ii, 517; (GUYE and BOGDAN), A., ii, 702.
deduced from the ratio of the densities of nitrogen and oxygen (GUYE), A., ii, 442.
of palladium (AMBERG), A., ii, 833.
of radium (RUDORF), A., ii, 69.
and the periodic system (JONES), A., ii, 789.
of silicon (BECKER and MEYER), A., ii, 246; (MEYER), A., ii, 815.
Atomic weights, table of, P., 6.
calculation of (MEYER), A., ii, 238.
sixth report of the Committee of the German Chemical Society on (LANDOLT, OSTWALD, and WALLACH), A., ii, 155.
addendum to the sixth report of the Committee of the German Chemical Society for fixing (ERDMANN; LANDOLT), A., ii, 308.
report of the International Committee on, P., 2.
Atoms, the higher limit of the absolute weight of, and the limits of visibility of fluorescence (SPRING), A., ii, 494.
and molecules, heats of combustion of (HENDERSON), A., ii, 145.
Atopite from Brazil (HUSSAK), A., ii, 398.
Atropa Belladonna, hyoscyamine from (SCHMIDT), A., i, 717.
Atropine, influence of, on the circulation through the submaxillary gland (HENDERSON and LOEWI), A., ii, 743.
Aucubin from *Aucuba japonica* (BOURQUELOT), A., i, 364.
Aurous compounds. See under Gold.
Autocatalysis (VISSER), A., ii, 511.
Autolysis (SCHUMM), A., ii, 840.
behaviour of carbohydrates in (NEUBERG and MILCHNER), A., ii, 45.
influence of the thyroid on (SCHRYVER), A., ii, 267.
Auto-oxidation. See under Oxidation.
Awaruite (JAMIESON), A., ii, 535.
Azelaic acid, phenyl ester, and thio- (BOUCHONNET), A., i, 566.
Azine, $C_{23}H_{13}O_3N_2Br$, from bromomorphenolquinone and *o*-tolylenediamine (VONGERICHTEN), A., i, 543.
Azlactones (*alkylideneoxazolones*) and their transformations (ERLENMEYER), A., i, 237; (ERLENMEYER and MATTER; ERLENMEYER and STADLIN), A., i, 238; (ERLENMEYER and WITTENBERG; ERLENMEYER and ARBENZ), A., i, 240.
o-**Azoacetanilide** (WILLSTÄTTER and PFANNENSTIEL), A., i, 724.
Azoacetoacetic acid, ethyl ester, reactions of (WOLFF), A., i, 839.
o-**Azoaniline** and its hydrogen sulphate (WILLSTÄTTER and PFANNENSTIEL), A., i, 723.
Azobenzene, *p*-amino-, condensations of (BUSCH and BERGMANN), A., i, 309.
2:2′-*di*amino-. See *o*-Azoaniline.
Azobenzyl alcohols, *m*- and *p*-, and their dibenzoyl derivatives (CARRÉ), A., i, 889.
Azo-colouring matter, $C_{18}H_{15}O_3N_2Na$, from the substance $(C_8H_5O_2N_2)_n$ and β-naphthol (ORLOFF), A., i, 189.
$C_{22}H_{26}N_5Cl$, from hæmopyrrole and toluenediazonium chloride (GOLDMANN, HEPTER, and MARCHLEWSKI), A., i, 725.
Azo-colouring matters, general method of determining the constitution of (SCHMIDT), A., i, 951.

Azo-colouring matters from alphylsulphonaminonaphthol derivatives (BADISCHE ANILIN- & SODA-FABRIK), A., i, 250.
from β-diketones and β-ketonic esters (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 723.
from nitro-*m*-diamines (BADISCHE ANILIN- & SODA-FABRIK), A., i, 251.
from *ar*-tetrahydro-α-naphthylamine (MORGAN and RICHARDS), A., i, 616.
amino-, from chlorochromotropic acid (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 953.
o-amino- (BUSCH and BERGMANN), A., i, 308.
o-hydroxy-, from α-naphthylamine (BADISCHE ANILIN- & SODA-FABRIK), A., i, 250.
Azo-compounds, constitution and colour of (ARMSTRONG and ROBERTSON), T., 1280; P., 180; (HANTZSCH), P., 289.
from the sulphonic acids of α-amino-β-naphthol (CHEMISCHE FABRIKEN VORM. WEILER-TER-MEER), A., i, 161.
from 3-hydroxydiphenylamine (OEHLER), A., i, 161.
aromatic, reaction of, with aromatic amines, differing from the induline synthesis (WEINSCHENK), A., i, 724.
amino-, method for the direct formation of certain (MELDOLA and EYNON), T., 1.
influence of substitution on the formation of (MORGAN and WOOTTON), T., 935; P., 179; (MORGAN and CLAYTON), T., 944; P., 182.
o-amino-, naphthazine syntheses from (ULLMANN and ANKERSMIT), A., i, 553.
hydroxy- (GOLDSCHMIDT and LÖWBEER), A., i, 389.
constitution of (TEICHNER), A., i, 952.
reduction of, to aminophenols by phenylhydrazine (ODDO and PUXEDDU), A., i, 842.
o-hydroxy-, constitution of (HEWITT and MITCHELL), P., 298.
p-hydroxy-, constitution of (MITCHELL), T., 1229; P., 220.
relation between quinonehydrazones and (BORSCHE), A., i, 161; (BORSCHE and OCKINGA), A., i, 719.
Azodiphenylmethane; a correction (FREUNDLER), A., i, 162.
2:2′-Azodiphenylmethane, 4:4′-*di*amino- (DUVAL), A., i, 652.
5-Azoeugenol and its constitution (ODDO and PUXEDDU), A., i, 492.
Azoimide, synthesis of (BROWNE), A., ii, 449.
physiological action of (SMITH and WOLF), A., ii, 106.
p-**Azophenetole**, properties of (DREYER and ROTARSKI), A., i, 952.
Azophenine, $C_{34}H_{32}O_4N_4$, from diazoamino-*p*-anisole (BUSCH and BERGMANN), A., i, 310.
Azophenols, substituted, nitration of (HEWITT and MITCHELL), T., 225; P., 61.
Azophenylindole (CASTELLANA and D'ANGELO), A., i, 940.
Azo-4-stilbazole (FRIEDLÄNDER), A., i, 819.
2:2′-Azotoluene, 4:4′- and 5:5′-*di*nitro- (ULLMANN and FRENTZELL), A., i, 308.
2:4:2′:4′-*tetra*nitro- (ZINCKE and MALKOMESIUS), A., i, 487.
Azo-*p*-toluene, amino-, formation of, from diazoamino-*p*-toluene (JUNGIUS), A., i, 555.
o-amino-, condensations of (BUSCH and BERGMANN), A., i, 308.
Azoxazones, constitution of (KEHRMANN and DE GOTTRAU), A., i, 670.
Azoxonium compounds (KEHRMANN), A., i, 930, 949.
p-**Azoxyanisole**, molecular depression constant of (SMITH and MCCLELLAND), A., ii, 11.
Azoxybenzaldehyde, transformation of (ALWAY and BONNER), A., i, 676.
Azoxybenzene, 3:5:3′:5′-*tetra*chloro-4:4′-*di*bromo- (FLÜRSCHEIM), A., i, 614.
m-**Azoxybenzyl alcohol** and its dibenzoyl derivative (CARRÉ), A., i, 889.
Azoxycinnamic acids, *m*- and *p*-, and their esters and sodium salts (MARIE), A., i, 554.
Azoxydicarbonamide dioxime and its salts (WIELAND), A., i, 421.
2:2′-Azoxydiphenylmethane, 4:4′-diamino- (DUVAL), A., i, 652.

B.

Bacillus, red, from American potatoes (PRINGSHEIM), A., ii, 274.
coli communis, estimation of, in potable waters (GAUTIÉ), A., ii, 660.
Delbrücki, behaviour of, at different temperatures (HENNEBERG), A., ii, 848.

Bacillus, diphtheria, and pseudo-diphtheria, relationship of (PETRIE), A., ii, 341.
macerans, a bacillus which produces acetone (SCHARDINGER), A., ii, 646.
megatherium bombycis found in silkworms (SAWAMURA), A., ii, 472.
pyocyaneus, production of fat from proteid by (BEEBE and BUXTON), A., ii, 108.
typhosus, isolation of, from infected water (WILLSON), A., ii, 748.
Bacteria, can nitrite provide oxygen in the anaërobic culture of ? (TAKAHASHI), A., ii, 340.
estimation of the oxygen-minima for germination, growth, and spore-production of (MEYER), A., ii, 848.
action of the radiations from radium bromide on (DIXON and WIGHAM), A., ii, 548.
action of injections of, on bone marrow and blood plasma (MULLER), A., ii, 468.
action of, on sugars (SEGIN), A., ii, 341.
decomposition of fodder and foods by (KÖNIG, SPIECKERMANN, and SEILER), A., ii, 472; (KÖNIG), A., ii, 747.
which are active in the maceration of flax (BEYERINCK and VAN DELDEN), A., ii, 749.
of infectious gastro-enteritis (POTTEVIN), A., ii, 748.
in milk (KONING), A., ii, 273.
anaërobic, apparatus for the cultivation of (MEYER), A., ii, 848.
denitrification, influence of different carbohydrates and organic acids on (STOKLASA and VÍTEK), A., ii, 342, 472.
lactic acid and putrefactive, sensitiveness of, towards poisons (RAHN), A., ii, 189.
action of, on cheese-ripening (v. FREUDENREICH and THÖNI), A., ii, 189.
lactose-fermenting, in fæces (MACCONKEY), A., ii, 601.
of fæces, action of dextrose on the (HARDEN), A., ii, 748.
nitrifying, modification of the method for isolating (PEROTTI), A., ii, 341.
nitrogen (LÖHNIS), A., ii, 601.
nitrogen-fixing (FISCHER), A., ii, 189.
presence and distribution of, in the sea (KEUTNER), A., ii, 189.
life conditions of (FISCHER), A., ii, 602.
Bacteria, nitrogen-fixing. See also Nitrification and Soils.
pathogenic, action of radium emanations on (DORN, BAUMANN, and VALENTINER), A., ii, 748.
sulphate-reducing, in mineral waters (GOSLINGS), A., ii, 108.
soil, assimilation of free nitrogen by (FRAPS), A., ii, 110.
Bacterium, an alcohol-producing (PRINGSHEIM), A., ii, 848.
betæ viscosum, fermentation of red beet by (PANEK), A., ii, 472.
uric acid, biochemical mechanism of the (ULPIANI and CINGOLANI), A., ii, 190.
See also Bacteria, Fermentation, Microorganisms, Moulds, and Yeasts.
Baeyer's tension theory and anhydrides of saturated dibasic acids (VOERMAN), A., i, 13.
Balalbans, Balalbanan, Balafluavil, and **Balagutta** (TSCHIRCH and SCHERESCHEWSKI), A., i, 713.
Balance, Nernst. See Micro-balance.
Balance sheet of the Chemical Society and of the Research Fund. See Annual General Meeting, T., 541.
Balata (TSCHIRCH and SCHERESCHEWSKI), A., i, 713.
Balsam, white Peru, from Honduras (HARTWICH and HELLSTRÖM), A., i, 454.
Balsams, the vanillin-hydrochloric reaction for (ROSENTHALER), A., ii, 489.
See also Resins.
Bamboo, flowering of (LOEW), A., ii, 344.
Barbaloin, constitution of, and *tri*bromo-, and their acetyl derivatives (JOWETT and POTTER), T., 878; P., 181.
Barbituric acid and its homologues, preparation of (MERCK), A., i, 179.
nitro-. See Dilituric acid.
Barium, preparation of (GUNTZ), A., ii, 87.
Barium alloy with mercury (*barium amalgam*), action of, on solutions of sodium and potassium salts (FERNEKES), A., ii, 33; (SMITH), A., ii, 164.
Barium bromide, action of potassammonium on (JOANNIS), A., ii, 450.
hydrated, dehydration of (KREIDER), A., ii, 636.
precipitation of, by hydrobromic acid (THORNE), A., ii, 118.
chloride, physiological action of (BRAT), A., ii, 846.
chromate, artificial production of (DE SCHULTEN), A., ii, 175.
*para*molybdate (JUNIUS), A., ii, 825.

Barium nitrate, decomposition of, by heat (BASCH), A., ii, 87.
nitrite and its decomposition by heat (RÂY), T., 177.
sulphate, solubility of (KÜSTER and DAHMER), A., ii, 248.
adsorption of iron salts by (KORTE), T., 1506 ; P., 229.
sulphite, solubility of, in water and in sucrose solutions (ROGOWICZ), A., ii, 821.
Barium cacodylate, preparation of (ANNONI), A., i, 758.
palladothiocyanate (BELLUCCI), A., i, 122.
platinocyanide, electrolytic preparation of (BROCHET and PETIT), A., i, 39.
Barium and strontium, detection of small quantities of (BLUM), A., ii, 204.
calcium, and strontium, estimation of, in presence of one another (BRILL), A., ii, 522.
Barium-haidingerite and **-monetite**, artificial production of (DE SCHULTEN), A., ii, 174.
Barley, influence of the composition of, on the development, quality, and productivity, and on the transmission of these properties (VAÑHA, KYAS, and BUKOVANSKY), A., ii, 755.
manuring experiments on (ULBRICHT), A., ii, 277; (VOELCKER), A., ii, 754.
influence of the various ratios of phosphoric acid to nitrogen on the growth of (BAHADUR), A., ii, 348.
pot experiments to determine the limits of endurance of, for certain injurious substances (GUTHRIE and HELMS), A., ii, 755.
estimation of albumin in (HEERDE and BUSCH), A., ii, 364.
estimation of extract in (REICHARD and PURUCKER), A., ii, 428.
estimation of nitrogen in (GLIMM), A., ii, 201 ; (NEUMANN), A., ii, 202.
Barleys, composition of (PRIOR), A., ii, 277.
"**Barszcz**" (PANEK), A., ii, 472.
Barutine, physiological action of (BRAT), A., ii, 846.
Base, $C_7H_7O_3NS$, from formaldehyde and the anilide of sulphanilic acid (ORLOFF), A., i, 190.
C_8H_9N, and $C_9H_{11}N$, and their nitroso-compounds, from formanilide and acetaldehyde and formanilide and acetone (ORLOFF), A., i, 190.
Base, $C_8H_{15}N$, decomposition of, and additive compound with benzaldehyde (WALLACH and RHOUSSOPOULOS), A., i, 818.
$C_8H_{17}N$, and its salts, nitrosoamine, and sulphonamide, from methylheptenylamine (WALLACH and RHOUSSOPOULOS), A., i, 818.
$(C_8H_9ON)_n$, and its nitroso-compound, from formaldehyde and formanilide (ORLOFF), A., i, 189.
$C_{10}H_{19}N$, from 3:8-diaminomenthane (SEMMLER), A., i, 222.
$C_{10}H_{19}N$, and its nitrosoamine, from β-thujoneiso-oxime (WALLACH and FRITZSCHE), A., i, 148.
$C_{12}H_{11}ON$, and its nitroso-compound, from formaldehyde and formyl-β-naphthylamine (ORLOFF), A., i, 190.
$C_{14}H_{15}ON$, from the reduction of the substance, $C_{14}H_{13}O_3N$ (KONOWALOFF and JATZEWITSCH), A., i, 764.
$C_{14}H_{23}ON$, from oil of caraway (SCHIMMEL & Co.), A., i, 537.
$C_{16}H_{19}O_3N$, from the substance, $C_{24}H_{23}O_4N$ (ERLENMEYER and BADE), A., i, 131.
$C_{17}H_{18}N_2$, and its salts and benzoyl derivative, from the reduction of α-dibenzylideneacetonehydroxylamineoxime (MINUNNI and CIUSA), A., i, 245.
$C_{18}H_{16}ON_2$, and its benzoyl derivative, from the lactone of the acid, $C_{32}H_{28}O_5N_2$ (REISSERT), A., i, 926.
$C_{18}H_{17}N_2Cl$, from the aldehyde, $C_{12}H_{13}ON$, aniline, and hydrochloric acid (ZINCKE and WÜRKER), A., i, 242.
$C_{20}H_{19}O_2N_3$, from the hydrolysis of carbanilido-5-hydroxy-2-methylbenzidine (GOLDSCHMIDT and LÖW-BEER), A., i, 390.
$C_{20}H_{16}O_2N_3Cl$, from carbanilido-*m*-chlorobenzenehydrazo-*p*-cresol (GOLDSCHMIDT and LÖW-BEER), A., i, 390.
$C_{22}H_{21}N_3$, and its salts and $C_{24}H_{23}ON_3$, from benzoflavine (HEWITT and FOX), T., 1061 ; P., 216.
$C_{22}H_{37}N_3$, and its salts, from formisobutaldol and dimethylaniline (SAMEC), A., i, 489.
Bases and pseudo-bases, suggested nomenclature of (HANTZSCH), A., i, 317.
action of, on chloral hydrate (ENKLAAR), A., i, 170, 741.
aromatic, compounds of, with palladous bromide and chloride (GUTBIER), A., , 584.

Bases, organic, condensing action of (KNOEVENAGEL; KNOEVENAGEL and MOTTEK), A., i, 61; (KNOEVENAGEL and ALBERT), A., i, 62; (KNOEVENAGEL and HERZ; KNOEVENAGEL and SCHRÖDER), A., i, 63; (KNOEVENAGEL and LANGENSIEPEN), A., i, 64; (KNOEVENAGEL and ARNOT; KNOEVENAGEL and WALTER), A., i, 65.
influence of indifferent solvents on the alkylation of (PINNER and FRANZ), A., i, 466; (MENSCHUTKIN), A., i, 663.
action of metallic cyanides on (STRUTHERS), P., 95.
tertiary cyclic, introduction of the benzoyl group into (REISSERT), A., i, 472, 925.
See also Amines and Diamines.
Basic slag. See Slag, basic.
"**Basic slag-ammonia**," a new manure (MÜLLER; HASELHOFF), A., ii, 650.
Basil, formation and distribution of the essential oil in (CHARABOT and LALOUE), A., ii, 112.
changes in the amount and nature of the volatile oil of, as the result of removing the flowers as they appear on the plant (CHARABOT and HÉBERT), A., ii, 850.
Bassia Parkii. See Karite tree.
Beckelite, a calcium cero-lanthano-didymo-silicate, from Mariupol district, Russia (MOROZEWICZ), A., ii, 177.
Beckmann rearrangement, mechanism of the (SLUITER), A., ii, 692.
by means of benzenesulphonyl chloride in presence of alkali or pyridine (WERNER and PIGUET), A., i, 66.
in oximes of ketone-alcohols of the benzoin type (WERNER and DETSCHEFF), A., i, 225.
Beer, refractometric analysis of (ACKERMANN), A., ii, 486; (BARTH), A., ii, 660.
detection of traces of zinc in (BRAND), A., ii, 653.
estimation of alcohol in, by means of the Zeiss immersion refractometer (ACKERMANN and STEINMANN), A., ii, 557.
Beer wort. See Wort.
Beer yeast. See Yeast.
Bees, inanition studies in (SLOWTZOFF), A., ii, 45.
Beeswax. See under Wax.
Beet juice, estimation of reducing substances in (H. and L. PELLET), A., ii, 290.
Beet molasses of various origin (DIETRICH and MACH), A., ii, 55.
Beetroot, red, bacteriological and chemical study of the fermentation of, known as "barszcz" (PANEK), A., ii, 472.
Beetroot (sugar), manuring experiments on (ANDRLÍK, STANĚK, and MYSÍK), A., ii, 550.
action of phosphoric acid on (RÖMER), A., ii, 757.
action of sodium chloride on (WOHLTMANN), A., ii, 759.
seedling diseases of (HILTNER and PETERS), A., ii, 413.
estimation of ammonia in (SELLIER), A., ii, 60.
and products of sugar factories, estimation of the harmful nitrogen in (ANDRLÍK), A., ii, 616.
direct estimation of sugar in, by Pellet's water process (H. and L. PELLET), A., ii, 210.
Benz-. See also Benzoyl- and under the parent Substance.
Benzal-. See Benzylidene-.
Benzaldazine, *o*-amino-, and its diacetyl derivative (RONCAGLIOLO), A., i, 652.
Benzaldehyde, action of light on a mixture of, with nitrobenzene (CIAMICIAN and SILBER), A., i, 335.
oxidation of, in presence of acetic anhydride (JORISSEN and RINGER), A., i, 354.
condensation of, with aminoacetone (ALEXANDER), A., i, 92.
condensation of, with isohydroxycarbamide (CONDUCHÉ), A., i, 288.
action of 5-methylacridine on (FRIEDLÄNDER), A., i, 829.
condensation of, with ethyl phenoxyacetate (STOERMER and KIPPE), A., i, 526.
condensation of, with toluene (KLIEGL), A., i, 186.
monohydrobromide (VORLÄNDER and SIEBERT), A., i, 792.
Benzaldehyde, *p*-chloro-, and *m*- and *p*-nitro-, action of nitrogen sulphide on (DAVIS), T., 1833; P., 258.
m-halogen derivatives, preparation of (METTLER), A., i, 790.
o- and *p*-hydroxy-, oxidising chlorination of (BILTZ), A., i, 66.
isomeric *di*hydroxy-, preparation of (SOMMER), A., i, 141.
2:3-*di*hydroxy- (SOMMER), A., i, 141.
p-iodo- (WILLGERODT and BOGEL), A., i, 901.
o-, *m*-, and *p*-iodo-, and their semicarbazones (WILLGERODT and RIEKE), A., i, 442.
m-nitro-, action of 5-methylacridine on (FRIEDLÄNDER), A., i, 829.

o-**Benzaldehyde-*o*-azobenzoic acid** and its oxime and semicarbazone (CARRÉ), A., i, 307.
Benzaldehydeazobenzoic acids, *m*- and *p*-, and their ethyl esters and the phenylhydrazone of the *m*-acid (ALWAY and BONNER), A., i, 676.
Benzaldehydephenyliodinium hydroxide and salts (WILLGERODT and RIEKE), A., i, 442.
Benzaldehydesulphonic acids (CHEMISCHE FABRIK VORM. SANDOZ), A., i, 141.
Benzaldehydesulphoxylic acid, sodium salt (BAZLEN), A., ii, 241.
Benzaldoxime and *o*-chloro-, reduction of (FRANZEN), A., i, 427.
Benzamide, salts of, with dicarboxylic acids (HENLE), A., i, 437.
N-chloro-. See Benzoylchloroamide.
thio-, action of thionyl chloride on, and its benzoyl derivative (TOCHTERMANN), A., i, 595.
Benzanthrone and **Benzanthronequinoline** (BALLY), A., i, 237.
Benzene, preparation of, free from sulphur (SCHWALBE), A., i, 124.
modern position of the theory of the constitution of (KAUFFMANN), A., i, 868.
ring system of (KAUFFMANN and BEISSWENGER), A., i, 280; ii, 218; (KAUFFMANN and GROMBACH), A., i, 280.
spatial formula for (KÖNIG), A., i, 185.
ultra-violet absorption spectrum of (BALY and COLLIE), T., 1332; P., 203; (FRIEDERICHS), A., ii, 782.
latent heat of evaporation of (BROWN), T., 265; P., 75.
and acetic acid and benzene and *n*-propyl alcohol, viscosity of (DUNSTAN), T., 15.
progressive chlorination of, in presence of the aluminium-mercury couple (COHEN and HARTLEY), T., 1360; P., 223.
action of sulphur or sulphur chlorides on, in presence of aluminium chloride (BOESEKEN), A., i, 583.
as indicator for iodometry (SCHWEZOFF), A., ii, 280; (MARGOSCHES), A., ii, 552.
isodiazotate, sodium derivative (NOELTING and KOPP), A., i, 872.
monosubstituted derivatives, ultra-violet absorption spectra of (BALY and COLLIE), T., 1332; P., 203.
disubstituted derivatives, ultra-violet absorption spectra of (BALY and EWBANK), T., 1355; P., 210.
Benzene, amino-. See Aniline.
*di*amino-. See Phenylenediamines.
p-bromo-, *p*-chloro-, and *p*-nitro-iodoxy- (MASCARELLI), A., i, 870.
*p-di*bromo- and *p-di*chloro-, vaporisation of isomorphous mixtures of (KÜSTER and DAHMER), A., ii, 230.
*p-di*bromo-, *v-m-di*bromoiodo-, and *p-di*chloro-, compounds of, with polyvalent iodine (WILLGERODT, LANDENBERGER, THIELE, and TRISCHMUTH), A., i, 580.
1-bromo-2:4-*di*nitro-, action of, on glycine (SANNA), A., i, 48.
*β-p-di*bromo*di*nitro-, non-existence of (HELLER and MEYER), A., i, 788.
2:6-*di*bromo- and 2:4-*di*chloro-1-nitroamino-, action of sulphuric acid on (ORTON and SMITH), T., 397; P., 92.
2:6-*di*bromo-4-nitro-1-nitroamino- and 2:4-*di*nitro-1-nitroamino- (ZINCKE and KUCHENBECKER), A., i, 487.
chloro-, nitration of (HOLLEMAN), A., i, 42.
isomeric *di*chloro-, nitration of (HOLLEMAN), A., i, 41.
di-o-chloro-, new mode of formation of (SCHMIDT and LADNER), A., i, 43.
*p-di*chloroamino-. See Aniline, 2:5-*di*chloro-.
1:4-*di*chloro-2-bromo- (NOELTING and KOPP), A., i, 872.
di-m-chloro-*p*-bromonitro- (FLÜRSCHEIM), A., i, 614.
isomeric chloronitro-derivatives, chlorination of (COHEN and BENNETT), T., 320; P., 80.
isomeric *di*chloronitro- (JAEGER), A., i, 583.
specific gravities of (HOLLEMAN), A., i, 42.
*s-tri*chloro-1-nitroamino-, preparation of, and action of sulphuric acid on (ORTON and SMITH), T., 392; P., 92.
fluoro-, and some of its derivatives (HOLLEMAN and BEEKMAN), A., i, 41.
o-fluoronitro- (HOLLEMAN), A., i, 424.
o-, *m*-, and *p*-fluoronitro- (HOLLEMAN), A., i, 515.
*s-tri*halogen-1-nitroamino-derivatives, transformations of (ORTON and SMITH), T., 389; P., 91.
hydroxy-. See Phenol.
1:2-*di*hydroxy-. See Catechol.
1:3-*di*hydroxy-. See Resorcinol.
1:4-*di*hydroxy-. See Quinol.

Benzene, 1:2:3-*tri*hydroxy-. See Pyrogallol.
1:2:4-*tri*hydroxy-. See Quinol, hydroxy-.
1:3:5-*tri*hydroxy-. See Phloroglucinol.
iodoxy-, compounds of, with mercuric bromide and chloride (MASCARELLI), A., i, 869.
nitro-, action of light on a mixture of, with benzaldehyde (CIAMICIAN and SILBER), A., i, 335.
m-nitronitroso- and *m*-*di*nitroso- (ALWAY and GORTNER), A., i, 516.
nitroso-, interaction of, with hydroxylamine (HANTZSCH), A., i, 617.
Benzeneazo-4-bromo- and **-4-ethoxy-α-naphthylamines** (BUSCH and BERGMANN), A., i, 310.
Benzene-2-azo-6-bromo- and **-6-chloro-4-nitro-*m*-phenylenediamines**, *p*-bromo- and *p*-chloro- (MORGAN and WOOTTON), T., 943.
Benzene-2-azo-4:6-*di*bromo- and **-*di*iodo-*m*-phenylenediamines**, *o*-, *m*-, and *p*-nitro- (MORGAN and WOOTTON), T., 937; P., 179.
Benzeneazocoumarin and its *o*-, *m*-, and *p*-nitro-derivatives, preparation of (MITCHELL), T., 1229; P., 220.
Benzeneazodiethylaniline. See Diethylaminobenzeneazobenzene.
Benzeneazodimethylcoumarin and *o*-, *m*-, and *p*-nitro-, preparation of (HEWITT and MITCHELL), P., 298.
Benzeneazoeugenol and *m*-bromo-, and their acetyl derivatives (ODDO and PUXEDDU), A., i, 492.
Benzeneazoformo-β-naphthylamide, *p*-hydroxy- (BORSCHE), A., i, 306.
Benzeneazoformotoluidides, hydroxy- (BORSCHE), A., i, 306.
4-Benzeneazo-3-methylpyrazole-1-*p*-benzoic acid, 5-chloro- (MICHAELIS, LEONHARDT, and WAHLE), A., i, 394.
Benzeneazonaphthamethylcoumarin and *o*-, *m*-, and *p*-nitro- (HEWITT and MITCHELL), P., 302.
Benzeneazo-β-naphthol and *p*-nitro-, copper compounds of (SCHAPOSCHNIKOFF and SVIENTOSLAVSKI), A., i, 161.
p-amino-, and its acetyl derivative, preparation of (MELDOLA and EYNON), T., 3.
2:5-*di*chloro- (NOELTING and KOPP), A., i, 872.
s-*tri*chloro- (ORTON and SMITH), T., 395.
o-**Benzeneazo-β-naphthylamine**, condensations of (BUSCH and BERGMANN), A., i, 309.
Benzeneazo-*o*-nitrophenol, *o*-, *m*-, and *p*-nitro-, and their acyl derivatives (HEWITT and MITCHELL), T., 226; P., 61.
Benzene-2-azo-4-nitro-*m*-phenylenediamine, *p*-bromo- (MORGAN and WOOTTON), T., 940.
Benzene-3-azo-5-nitro-2:4-tolylenediamine, *p*-bromo- and *p*-nitro- (MORGAN and WOOTTON), T., 940.
Benzeneazophenol, *p*-amino-, decomposition of (MELDOLA and EYNON), T., 2.
4-Benzeneazo-1-phenyl-5-methyl-pyrazole, 3-chloro-, and **-3-pyrazolone** (MICHAELIS), A., i, 244.
4-Benzeneazo 1-phenyl-3-methylpyrazole-5-thioglycollic acid and its silver salt (MICHAELIS, LEONHARDT, and WAHLE), A., i, 393.
Benzeneazo-*o*-tolueneazo-β-naphthol, *p*-nitro- (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 162.
4-Benzeneazo-1-*p*-tolyl-3-methylpyrazole-5 glycollic acid and its barium salt (MICHAELIS, LEONHARDT, and WAHLE), A., i, 395.
Benzeneazo-. See also Phenylazo-.
Benzenediazo-. See Diazobenzene.
Benzene-*m*-disulphon-*s*-dimethylamide (CHATTAWAY), T., 161; P., 7.
Benzene-*m*-disulphon-halogen- and **-alkylhalogen-amides** (CHATTAWAY), T., 155; P., 7.
Benzene-1:3-disulphonyl-bis-*p*-phenylenediamine and its diazotisation and **-bis-*p*-aminobenzeneazo-β-naphthol** (MORGAN and MICKLETHWAIT), T., 1308; P., 222.
Benzenehexacarboxylic acid. See Mellitic acid.
β-Benzenehydrazo-α-benzoylnaphthol (GOLDSCHMIDT and LÖW-BEER), A., i, 390.
Benzenesulphinic acid, *p*-chloro- (TRÖGER and HILLE), A., i, 337.
p-iodo- (TRÖGER and VOLKMER), A., i, 356.
Benzenesulphomethylamide, action of pure nitric acid on (BACKER), A., i, 766.
Benzenesulphonacetic acid, amide, nitrile, and thioamide of, and their bromo-, chloro-, and iodo-derivatives (TRÖGER and HILLE), A., i, 336.
Benzenesulphonacetiminoethyl ether hydrochloride (TRÖGER and HILLE), A., i, 337.
Benzenesulphonacetonitrile, *p*-bromo- and *p*-chloro-, sodium derivatives, and the action of benzyl chloride on (TRÖGER and VASTERLING), A., i, 871.

Benzene-*m*-sulphonalkylamides, nitro- (CHATTAWAY), T., 159; P., 7.
Benzenesulphonamino-*o*-azo-*p*-toluene (BUSCH and BERGMANN), A., i, 308.
8-Benzenesulphonamino-α-naphthol-4-sulphonic acid (BADISCHE ANILIN- & SODA-FABRIK), A., i, 250.
***N*-Benzenesulphonanthranilic acid** (v. PAWLEWSKI), A., i, 437.
***p*-Benzenesulphonbenzoic acid** and its barium salt (WEEDON and DOUGHTY), A., i, 346.
Benzenesulphon-ψ-cumidide, **-heptadecylamide**, **-*m*-toluidide**, and **-*o*-xylidide** (HINSBERG and KESSLER), A., i, 339.
Benzenesulphondialkylacetonitriles and their *p*-bromo-, *p*-chloro-, and *p*-iodo-derivatives (TRÖGER and VASTERLING), A., i, 870.
Benzenesulphondipropylthioacetamide (TRÖGER and VASTERLING), A., i, 871.
Benzenesulphonethenylaminoxime and *p*-bromo-, *p*-chloro-, and *p*-iodo- (TRÖGER and VOLKMER), A., i, 356.
Benzenesulphonethyl-*p*-xylidide (HINSBERG and KESSLER), A., i, 339.
Benzenesulphon-halogen- and **-alkylhalogen-amides** and nitro- (CHATTAWAY), T., 148; P., 7.
Benzenesulphonic acid, methyl ester, hydrolysis of (PRAETORIUS), A., i, 186.
4-fluoro-3-nitro- (HOLLEMAN), A., i, 424.
m-nitro-, potassium salt, action of potassium cyanide on (HOLLEMAN), A., i, 595.
Benzenesulphonic anhydride (BILLETER), A., i, 584.
1-Benzenesulphontetrahydroquinoline and its 2-methyl derivative (VAN DORP), A., i, 82.
***as*-Benzenesulphonyl-*N*-methyl-1:8-naphthylenediamine** and its diazo-derivative (MORGAN and MICKLETHWAIT), P., 304.
Benzenesulphonylmethyl-*o*-, **-*m*-**, and **-*p*-nitroanilines** and their reduction (MORGAN and MICKLETHWAIT), T., 84.
***as*-Benzenesulphonylmethylphenylenediamines** and their diazotisation and azo-β-naphthol derivatives (MORGAN and MICKLETHWAIT), T., 85; P., 9.
Benzenesulphonyl-α-naphthylamine, 8-nitro- (MORGAN and MICKLETHWAIT), P., 303.
Benzenesulphonyl-1:4-naphthylenediamine and its diazotisation and azo-β-naphthol derivative (MORGAN and MICKLETHWAIT), T., 928; P., 179.
Benzenesulphonylnaphthylenediamines, 1:5- and 1:8-, diazo-derivatives of (MORGAN and MICKLETHWAIT), P., 303.
Benzenesulphonyl-*o*-, **-*m*-**, and **-*p*-nitroanilines** (MORGAN and MICKLETHWAIT), T., 79.
Benzenesulphonyl-4-nitro-1-naphthylamine (MORGAN and MICKLETHWAIT), T., 928; P., 179.
Benzenesulphonyl-5-nitro-*o*-toluidine (MORGAN and MICKLETHWAIT), T., 925; P., 179.
Benzenesulphonyl-5-nitro-*p*-xylidine (MORGAN and MICKLETHWAIT), T., 926; P., 179.
Benzenesulphonylphenylenediamines, diazo-derivatives of the, and their diazoimides and azo-β-naphthol derivatives (MORGAN and MICKLETHWAIT), T., 73; P., 8.
Benzenesulphonyl-2:5-tolylenediamine, diazotisation of, and its azo-β-naphthol derivative (MORGAN and MICKLETHWAIT), T., 925; P., 179.
Benzenesulphonyl-*p*-xylylene-2:5-diamine and its diazotisation and azo-β-naphthol derivative (MORGAN and MICKLETHWAIT), T., 926; P., 179.
Benzene-1:2:3-tricarboxylic acid. See Hemimellitic acid.
Benzhydrol (*diphenylcarbinol*), colourless salts of (LAMBRECHT and WEIL), A., i, 128.
sodium derivative, reactions of (BACON), A., i, 203.
Benzhydroxamic acid (MARQUIS), A., i, 524.
Benzhydryltetraphenylmethane (TSCHITSCHIBABIN), A., i, 125; (JACOBSON), A., i, 186; (GOMBERG and CONE), A., i, 641.
***o*-Benzhydryltriphenylcarbinol** (GUYOT and CATEL), A., i, 226, 540.
Benzidine (di-*p-aminodiphenyl*), action of formaldehyde and sodium hydrogen sulphite on (PRUD'HOMME), A., i, 548.
reaction of, with potassium ferricyanide (BARSILOWSKY), A., i, 549.
chromate, composition of (KOTSCHUBEY), A., i, 549.
hydrofluoride and hydrosilicofluoride (EHRENFELD), A., i, 474.
Benzil, condensation of, with ketones (JAPP and KNOX), T., 673; P., 152.
condensation of, with resorcinol (v. LIEBIG), A., i, 781.
action of semicarbazide on (BILTZ), A., i, 673.

Benzil dihydrocyanide and its diacetyl derivative (JAPP and KNOX), T., 681; P., 153.
Benzil, *p*-hydroxy- (WEISL), A., i, 904.
2:4- or 2:6-*di*hydroxy- (FINZI), A., i, 906.
Benziminazole, 5-bromo-, and its salts (FISCHER and MOUSON), A., i, 246.
Benziminazoles and their decomposition (FISCHER), A., i, 245.
Benzoflavine (2:8-di*amino*-5-*phenyl*-3:7-*dimethylacridine*) and its acetyl derivatives and action of methyl iodide on (HEWITT and FOX), T., 1058; P., 215.
Benzofuroinoximes, *α*- and *β*-, and their acetyl derivatives and compounds with phenylcarbimide (WERNER and DETSCHEFF), A., i, 225.
Benzoic acid and its derivatives, physical properties of (LUMSDEN), T., 93; P., 14.
solubility of, in various solvents (HOFFMANN and LANGBECK), A., ii, 374.
influence of various sodium salts on the solubility of (PHILIP), T., 987; P., 200.
nitration of (HOLLEMAN), A., i, 42.
di-*o*-substituted, methyl esters, conversion of, into ethyl esters (SUDBOROUGH and DAVIES), P., 87.
Benzoic acid, benzaminoethyl ester (GABRIEL), A., i, 651.
2:6-dibromophenyl ester (BORSCHE and OCKINGA), A., i, 720.
Benzoic acid, *o*-amino-. See Anthranilic acid.
m- and *p*-amino-, reduction of (LANGGUTH), A., i, 593.
N-cinnamoyl derivatives (REINICKE), A., i, 788.
p-amino-, methylation of (JOHNSTON), P., 156.
isomeric amino-, condensation of, with ethyl malonate (v. POLLACK), A., i, 353.
isomeric *di*bromo-, menthyl esters, rotation of (COHEN and ZCRTMAN), P., 306.
o- and *m*-chloro-, nitration of (HOLLEMAN), A., i, 42.
o-fluoro- (HOLLEMAN), A., i, 425.
hydroxy-derivatives, oxidation products of (PERKIN and NIERENSTEIN), T., 1412; P., 185.
electrolytic oxidation of (A. G. and F. M. PERKIN), P., 212.
o-hydroxy-. See Salicylic acid.
2:4-*di*hydroxy-. See *β*-Resorcylic acid.
2:5-*di*hydroxy-. See Quinolcarboxylic acid.
Benzoic acid, 3:4-*di*hydroxy-. See Protocatechuic acid.
2:3:4-*tri*hydroxy-. See Pyrogallolcarboxylic acid.
3:4:5-*tri*hydroxy-. See Gallic acid.
o-nitro-, solubility of, in various solvents (HOFFMANN and LANGBECK), A., ii, 374.
influence of various sodium salts on the solubility of (PHILIP), T., 987; P., 200.
p-nitro-, isopropyl ester (BUCHNER and MEISENHEIMER), A., ii, 274.
o- and *p*-nitro-, menthyl esters, crystallographic and optical properties of (GRAHAM), T., 1193.
o-, *m*-, and *p*-nitro-, menthyl esters, rotation of (COHEN and ARMES), T., 1190; P., 218.
5-nitro-3-amino-4-cyano-2:6-*di*hydroxy-, ethyl ester and ammonium salt of (BORSCHE and GAHRTZ), A., i, 895.
3:5-*di*nitro-4-hydroxy-, ethyl ester, reaction of, with potassium cyanide (BORSCHE and BÖCKER), A., i, 51.
thio-, *p*-methoxy- and *p*-ethoxy-phenyl esters of (TABOURY), A., i, 644.
***o*-Benzoic sulphinide** ("*saccharin*"), action of chlorine and caustic alkalis on (CHATTAWAY), T., 1882; P., 284.
detection of (v. MAHLER), A., ii, 127.
detection of, in wine (CHACE), A., ii, 292.
estimation of (PROCTOR), T., 242; P., 62.
Benzoin, chemical kinetics of the synthesis of (STERN), A., ii, 150.
reactions of (GARNER), A., i, 143.
action of semicarbazide on (BILTZ), A., i, 673.
acetyl and *p*-nitrobenzoyl derivatives (MEISENHEIMER), A., i, 291.
sodium derivative (GARNER), A., i, 143; (MEISENHEIMER), A., i, 291.
Benzoinoximes, *α*- and *β*-, and their acetyl derivatives and compounds with phenylcarbimide (WERNER and DETSCHEFF), A., i, 225.
Benzonitrile, reduction of (FRÉBAULT), A., i, 437.
2:5-*di*chloro- (NOELTING and KOPP), A., i, 872.
Benzophenone, action of ammonium sulphide on (MANCHOT and KRISCHE), A., i, 142.
4:4′-*di*amino- (v. GEORGIEVICS), A., i, 357.
4:4′-*di*bromo-, -*di*chloro-, -*di*iodo-, and -*di*nitro- (FISCHER and HESS), A., i, 205.

Benzophenone, *p*-iodo-, *p*-iodoso-, and *p*-iodoxy-derivatives, iododichloride, and phenyliodonium hydroxide and salts (WILLGERODT and BOGEL), A., i, 901.

Benzophenone ammonia (*iminobenzophenone*) (THOMAE), A., i, 718.

Benzophenonesulphone and 3-chloro- (ULLMANN and LEHNER), A., i, 289.

Benzophenone-*p*-xylylhydrazone (WILLGERODT and LINDENBERG), A., i, 550.

Benzopinacones, intramolecular atomic rearrangements in (MONTAGNE), A., i, 58, 445, 524; (ACREE), A., i, 216.

Benzoquinone picrate (BRUNI and TORNANI), A., i, 270.

o-**Benzoquinone** (WILLSTÄTTER and PFANNENSTIEL), A., i, 144.

*tetra*bromo-, behaviour of, towards aldehydes and ketones (JACKSON and RUSSE), A., i, 217.

alcoholic derivatives of (JACKSON and CARLTON), A., i, 907.

p-**Benzoquinone**, action of azoimide on (ESCALES), A., i, 145.

*tetra*bromo- and *tetra*chloro- (*bromo-* and *chloro-anils*), action of potassium iodide on (TORREY and HUNTER), A., i, 217.

*di*bromo*di*iodo-, and its reactions (TORREY and HUNTER), A., i, 217.

p-**Benzoquinone-5-sulphonic acid**, 2-nitro-3:6-*di*hydroxy-, and its salts (NIETZKI and HUMANN), A., i, 217.

Benzothiazole, action of benzoyl chloride on (REISSERT), A., i, 927.

Benzoxy-. See Benzoyloxy-.

Benzoyl-. See also Benz-, Benzo-, and under the parent Substance.

Benzoyl acetyl peroxide (JORISSEN and RINGER), A., i, 354.

nitrate, preparation and reactions of (FRANCIS), P., 302.

Benzoylacetic acid, ethyl ester, action of, on anthranilic acid (v. NIEMENTOWSKI), A., i, 611.

Benzoylacetone, copper derivative, and *di*thio-, action of carbonyl chloride on (VAILLANT), A., i, 460.

Benzoylacetonitrile, action of cyanogen bromide on (v. MEYER), A., i, 155.

Benzoylacetylacetanilide (DIECKMANN, HOPPE, and STEIN), A., i, 136.

Benzoyl-β-alanine and its silver salt (HOLM), A., i, 29.

Benzoylamino-. See under the parent Substance.

5-Benzoylanilino-1-phenyl-3-methylpyrazole (MICHAELIS and HEPNER), A., i, 480.

Benzoylazo-4-hydroxy-benzene, -3-methylbenzene, and **-2-methyl-5-*iso*propylbenzene**, and their bromo- and benzenesulphinic acid derivatives and **-naphthalene** (BORSCHE and OCKINGA), A., i, 719.

2-Benzoylazo-1-hydroxynaphthalene (BORSCHE and OCKINGA), A., i, 720.

o-**Benzoylbenzoic acid** and its esters, amide, and chloride (MEYER), A., i, 133.

4-amino-, 4-hydroxy-, and 4-nitro- (KLIEGL), A., i, 187.

*tetra*chloro- and *p*-hydroxy-, isomeric methyl esters of (MEYER), A., i, 134.

4-nitro-, its methyl esters and chloride, and dinitro-derivative (LANG), A., i, 895.

Benzoylbenzylaminecarboxylic acid (EINHORN), A., i, 345.

β-Benzoyl-α-benzylpropionic acid (KOHLER), A., i, 359.

Benzoylcarbinol and its reactions (KLING), A., i, 732.

Benzoylchloroamide, reactions of (MOHR), A., i, 891.

Benzoylcoumarin and its oxime (KNOEVENAGEL and ARNOT), A., i, 65.

s-**Benzoyl-ψ-cumylhydrazide** (WILLGERODT and HERZOG), A., i, 550.

1-Benzoyl-1:2-dihydroquinoline, 2-cyano- and 2-hydroxy- (REISSERT), A., i, 472.

2-Benzoyl-1:2-dihydro*iso*quinoline, 1-cyano- (REISSERT), A., i, 926.

γ-Benzoyl-βγ diphenylbutyrolactone (GARNER), A., i, 144.

2-Benzoyl-2:3-diphenyltetrahydrofuran, 5-hydroxy-, and its acetyl derivative (GARNER), A., i, 144.

Benzoyl group, introduction of, into tertiary cyclic bases (REISSERT), A., i, 472, 925.

Benzoylhydrazide, *di*cyano- (RINMAN), A., i, 389.

Benzoylhydrocotarnineacetic acid and its ethyl ester and silver salt (AHLERS), A., i, 786.

s-**Benzoyl-4-hydroxy-phenyl-, -3-methylphenyl-**, and **-2-methyl-5-*iso*propylphenylhydrazines** (BORSCHE and OCKINGA), A., i, 720.

2-Benzoylimino-3-phenylthiodiazoline and its 5-ethoxy-derivative (WHEELER and STATIROPOULOS), A., i, 722.

Benzoylmalonanilic acid, ethyl ester (DIECKMANN, HOPPE, and STEIN), A., i, 136.

5-Benzoyloxy-1-*p*-bromophenyl-1:2:3-triazole-4-carboxylic acid, ethyl ester (DIMROTH and STAHL), A., i, 386.

5-Benzoyloxy-1-*p*-tolyl-1:2:3-triazole-4-carboxylic acid, ethyl ester (DIMROTH and STAHL), A., i, 385.

2-Benzoyl-5-phenylglyoxaline and its 1-methyl methiodide derivative (PINNER), A., i, 476.

Benzoylpiperidine, decomposition products (containing halogens) from (v. BRAUN and STEINDORFF), A., i, 596.

Benzoylquinol monomethyl ether (KAUFFMANN and GROMBACH), A., i, 280.

α-Benzoyl-β-trimethacetylstyrene, action of hydrazine on (JAPP and WOOD), T., 707; P., 154.

Benzoyltriphenylpropenol (KOHLER and HERITAGE), A., i, 207; (KOHLER and JOHNSTIN), A., i, 216.

***s*-Benzoyl-*p*-xylylhydrazide** (WILLGERODT and LINDENBERG), A., i, 551.

Benzyl alcohol, *m*-amino- and *m*-iodo- (LANGGUTH), A., i, 593.

*di*chloro*di*bromohydroxy- (ZINCKE and BUFF), A., i, 881.

o-nitro-, decomposition of, under the influence of aqueous and of alcoholic sodium hydroxide (CARRÉ), A., i, 307.

m- and *p*-nitro-, decomposition of (CARRÉ), A., i, 889.

Benzyl bromide, 3:5-*di*bromo-4-hydroxy-, condensation of, with phenols (AUWERS and RIETZ), A., i, 887.

and *o*- and *p*-nitro-, action of phenylhydrazine and *p*-bromophenylhydrazine on (FLASCHNER), A., i, 936.

Benzyl methyl ether, *p*-amino-, and its benzoyl derivative, and *p*-nitro- (ROMEO), A., i, 435.

Benzylacetoacetamide (GUARESCHI), A., i, 823.

Benzylacetone, *p*-nitro-, and its phenylhydrazone, and *op-di*nitro- (ALBER), A., i, 235.

Benzylalkylconhydrinium iodides, isomeric, and their additive salts (SCHOLTZ and PAWLICKI), A., i, 473.

Benzylamine, acyl derivatives (EINHORN), A., i, 344.

and *o*-chloro-, and its salts (FRANZEN), A., i, 427.

m-nitro-*o*-hydroxy-, benzoyl and chloroacetyl derivatives of (EINHORN), A., i, 345.

Benzylaminoazo-*p*-toluene and its hydrochloride and nitrosoamine (BUSCH and BERGMANN), A., i, 309.

5-Benzylamino-1-phenyl-3-methylpyrazole and its acyl derivatives and additive salts (MICHAELIS and BLUME), A., i, 479.

Benzyl*iso*amylconinium iodides, isomeric (SCHOLTZ), A., i, 297.

Benzylaniline, influence of temperature on the action of acetyl thiocyanate on (DORAN and DIXON), T., 339; P., 77.

α-bromopropionyl derivative, condensation of, with sodium derivatives of phenols (BISCHOFF), A., i, 84.

o-chloro-ω-cyano- (BADISCHE ANILIN- & SODA-FABRIK), A., i, 438.

Benzylanilinoazobenzene (VIGNON and SIMONET), A., i, 495.

Benzylanthranil (KERNOT and PETRONE), A., i, 284.

Benzylanthranilic acid and its phenyl, tolyl, and naphthyl esters (KERNOT and PETRONE), A., i, 283.

ω-cyano- (BADISCHE ANILIN- & SODA-FABRIK), A., i, 438.

β-Benzyl-γ-benzylidenebutyrophenone. See β-Benzyl-β-styrylpropiophenone.

Benzylbutylconinium iodides, isomeric (SCHOLTZ), A., i, 297.

α-Benzylbutyric acid, γ-*tri*chloro-β-hydroxy-, and its salts (DOEBNER and KERSTEN), A., i, 787.

Benzylcamphoformeneamine and its **carboxylic acid** and its benzylamine salt (TINGLE and HOFFMANN), A., i, 799.

Benzyl-*p*-cresol and **-ψ-cumenol**, 3:5-*di*bromo-4-hydroxy- (AUWERS and RIETZ), A., i, 888.

α-Benzyldihydroberberine and its salts (FREUND and BECK), A., i, 151.

Benzyldimethylaminomethylcarbinol and its additive salts and benzoyl derivative (FOURNEAU), A., i, 57.

Benzyl-αβ-dimethylpropylsulphone (POSNER and TSCHARNO), A., i, 279.

2-*o*-Benzylene-6-methylpyridine and its hydrate and additive salts (ERRERA and CASARDI), A., i, 446.

2-*o*-Benzylenone-6-methylpyridine and its oxime (ERRERA and CASARDI), A., i, 446.

Benzylethylacetic acid, phenylethylamides of (MOHR), A., i, 428.

Benzylethylaniline (GNEHM), A., i, 273; (VAUBEL and SCHEUER), A., i, 274.

Benzylethylconinium iodides, isomeric (SCHOLTZ), A., i, 296.

Benzylideneacetophenone (MAYER), A., i, 214.

hydrochloride and its compound with benzaldehyde and dipicrate (VORLÄNDER, ROLLE, and SIEBERT), A., i, 793.

Benzylideneacetylacetone, action of hydrogen sulphide on (RUHEMANN), T., 25.

5-Benzylideneamino-6-oxy-2-ethylthiolpyrimidine (JOHNSON), A., i, 836.
Benzylideneaniline (VAUBEL and SCHEUER), A., i, 274.
condensation of, with ethyl acetonedicarboxylate (MAYER), A., i, 429.
condensation of, with ketones (MAYER), A., i, 214, 357.
action of magnesium organic compounds on (BUSCH and RINCK), A., i, 519.
Benzylideneaniline, *p*-iodo- (WILLGERODT and BOGEL), A., i, 901.
***N*-Benzylideneanthranilic acid,** *p*-amino- and *p*-nitro- (v. PAWLEWSKI), A., i, 438.
Benzylideneazine, *tetra*bromo-, action of ammonia on (STOLLÉ), A., i, 249.
o-, *m*-, and *p*-iodo- (WILLGERODT and RIEKE), A., i, 442.
Benzylidenebenzidine, *o*-, *m*-, and *p*-iodo- (WILLGERODT and RIEKE), A., i, 442.
Benzylidene-*p*-bromophenylhydrazine, *m*-nitro- (OTT), A., i, 376.
γ-Benzylidene-β-ethylbutyrophenone. See β-Styryl-β-ethylpropiophenone.
Benzylidenehippuric acid, *m*-hydroxy-, and its ethyl ester, and piperidide (ERLENMEYER and WITTENBERG), A., i, 240.
Benzylidenehydrazine, acetyl and benzoyl derivatives, metallic compounds of (STOLLÉ and MÜNCH), A., i, 94.
Benzylidenehydrazines, *o*-amino-, acetyl derivatives of (RONCAGIOLO), A., i, 652.
Benzylidenehydroxydihydrophenanthranil (JAPP and KNOX), T., 683.
Benzylidenelævulic acid and its ethyl ester (MAYER), A., i, 357.
Benzylidenemalonic acid, ethyl hydrogen ester (REINICKE), A., i, 787.
ethyl ester, reactions of, with magnesium organic compounds (KOHLER), A., i, 700.
Benzylidenemalononitrile, *o*-hydroxy- (HINRICHSEN and LOHSE), A., i, 132.
Benzylidenemethyl ethyl and **heptyl ketones** (MAYER), A., i, 215.
Benzylidene-2-methylnaphthathiazoles. See 2-Styrylnaphthathiazoles.
Benzylidene-α- and **-β-naphthylamines** and **ω**-cyano- (BADISCHE ANILIN- & SODA-FABRIK), A., i, 438.
Benzylidene-α-*iso*propylanhydroacetonebenzil (JAPP and KNOX), T., 677.
Benzylidenetetrazoline and its *o*- and *p*-*mono*- and 3:4-*di*-hydroxy- and *o*-, *m*-, and *p*-nitro-derivatives (RUHEMANN and MERRIMAN), T., 1774.
Benzylidenethioxanthen and its additive salts (DECKER and v. FELLENBERG), A., i, 668.
Benzylidenethujone (HALLER), A., i, 602.
2-Benzylidene-1:3:3-trimethylindoline and its additive salts (BRUNNER), A., i, 468.
9-Benzylidenexanthen (DECKER, BÜNZLY, and v. FELLENBERG), A., i, 668.
4-Benzyliminopyrine and its methyl derivative (MICHAELIS and PREUNER), A., i, 479.
2:5-Benzyliminopyrine and its additive salts (MICHAELIS and BLUME), A., i, 480.
β-Benzylmalic acid and its salts (DOEBNER and KERSTEN), A., i, 786.
Benzylmalimides (LUTZ), A., i, 191; (LADENBURG and HERZ), A., i, 272.
Benzylmalonic acid, ethyl hydrogen ester, and its potassium salt, amide, and chloride (MARGUERY), A., i, 507.
Benzylmethylaminomethylcarbinol and its methiodide and dibenzoyl derivative (FOURNEAU), A., i, 57.
1-Benzyl-2-methyl-1-ethyltetrahydroquinolinium iodide (SCHOLTZ and PAWLICKI), A., i, 474.
Benzylmethylglutaconimide, cyano-, and its metallic and alkaloidal derivatives (GUARESCHI), A., i, 823.
4-Benzyl-1-methyl-3-*cyclo*hexanol and hydroxy- (HALLER and MARCH), A., i, 276, 771.
Benzyl methyl ketone, condensation of, with nitromalonaldehyde (HILL and HALE), A., i, 200.
Benzylmethylmalonic acid, *p*-nitro-, and its salts and ethyl ester (ROMEO), A., i, 435.
Benzylmethyltriazen and its metallic derivatives (DIMROTH), A., i, 312.
4-Benzyl-1:2-naphthaquinol, cyano-, and 1:2-*di*hydroxycyano-, and its diacetyl derivative (SACHS and CRAVERI), A., i, 910.
Benzyl-β-naphthol, 3:5-*di*bromo-4-hydroxy- (AUWERS and RIETZ), A., i, 888.
Benzylnaphthyl-. See Naphthylbenzyl-.
Benzylphenyl-. See also Phenylbenzyl-.
Benzyl-β-phenylpropylsulphone (POSNER and TSCHARNO), A., i, 279.
Benzylpropylconinium iodides, isomeric (SCHOLTZ), A., i, 297.
Benzylsulphonic acid. See Toluene-ω-sulphonic acid.
β-Benzyl-β-styrylpropiophenone and its dibromide and oxime (KOHLER), A., i, 359.

Benzylthiolbenzylacetylacetone (RUHEMANN), T., 21.
3-Benzylthiol-1:4-diphenylurazole (WHEELER and STATIROPOULOS), A., i, 721.
Benzylthioxanthen (DECKER and v. FELLENBERG), A., i, 668.
Benzyl-*o*- and -*p*-toluidines, *o*-nitro- (JAEGER), A., i, 585.
9-Benzyl-xanthen and **-xanthenol** (DECKER, BÜNZLY, and v. FELLENBERG), A., i, 668.
Benzylxanthylium salts (DECKER, BÜNZLY, and v. FELLENBERG), A., i, 668.
Benzyl-*p*-xylenol, 3:5-*di*bromo-4-hydroxy- (AUWERS and RIETZ), A., i, 888.
Berberine, three tautomeric forms of (GADAMER), A., i, 369.
Beryllium. See Glucinum.
Betaine, chemico-physiology of (VELICH and STANĚK), A., ii, 266.
physiological action of (VELICH), A., ii, 106.
estimation of, in the products of sugar factories (STANĚK), A., ii, 562.
salts, preparation of, from molasses (STIEPEL), A., i, 416.
Betaine, ethyl ester, hydrochloride and platinichloride of (KOEPPEN), A., i, 176.
Betulol and its acetate (v. SODEN and ELZE), A., i, 451.
Bicarbonates, nuclear synthetical equilibrium between phenols, phenolcarboxylic acids, and, in aqueous solution (HÄLLSTRÖM), A., ii, 511.
Bikhaconine and its properties and salts (DUNSTAN and ANDREWS), T., 1644; P., 234.
Bikhaconitine, extraction of, from *Aconitum spicatum*, and its composition, properties, and salts (DUNSTAN and ANDREWS), T., 1636; P., 234.
Bile, effect of intravenous injections of, on blood-pressure (MELTZER and SALANT), A., ii, 836.
conjugated glycuronic acids in (BIAL), A., ii, 643.
human (ÖRUM), A., ii, 337.
ox, taurocholeic acid from (GULLBRING), A., ii, 737.
Bile acids, cause of the fluorescent reaction of, with sulphuric acid (PREGL), A., i, 728.
Bile pigments in leeches (SPIESS), A., ii, 737.
Bilipurpurin, phylloerythrin, and cholehæmatin, identity of (MARCHLEWSKI), A., i, 500, 847.
Bilirubin and its azo-derivatives (ORNDORFF and TEEPLE), A., i, 365.
Birch buds, oil of (v. SODEN and ELZE), A., i, 451.
Bird cherry. See *Prunus Padus*.
Birds, action of epinephrine subcutaneously administered on (NOËL PATON), A., ii, 106.
Birds' red corpuscles. See Blood corpuscles.
Bis-1-acetyl-3-triazole and its 5-alkyl- and 5-phenyl derivatives (RINMAN), A., i, 388.
3':5'-Bis-3:5-*di*bromo-4-hydroxybenzyl-*p*-cresol and **-*p*-xylenol** (AUWERS and RIETZ), A., i, 887.
Bisdiazobenzenemethylamide (DIMROTH), A., i, 311.
Bisdiazoles, formation of (STOLLÉ and MÜNCH), A., i, 95; (STOLLÉ and KIND), A., i, 96.
Bisdibenzenesulphone-methylene-, -ethylene-, and -trimethylene-*m*-phenylenediamines and **-trimethylene-*p*-phenylenediamine** (HINSBERG and KESSLER), A., i, 722.
Bisdiethylcetrol (HESSE), A., i, 139.
4:6-Bisdinaphthaxanthylbenzene, 1:3-*di*hydroxy-, and its diacetyl derivative (FOSSE and ROBYN), A., i, 607.
Bisdiphenylene-ethylene (SMEDLEY), T., 1254; P., 221.
Bis-5-ethyl-3-triazole and its salts and 1-acetyl derivative (RINMAN), A., i, 388.
Bis-*p*-hydroxybenzyl-*p*-cresol and its triacetate (AUWERS and RIETZ), A., i, 887.
Bismethylenedioxyindigo. See Piperonalindigo.
Bis-5-methyl-3-triazole and its salts and its 1-acetyl derivative (RINMAN), A., i, 388.
Bismuth, presence of, in pyrites from Agordo (PIUTTI and STOPPANI), A., ii, 718.
Hall effect of, at high temperatures (v. TRAUBENBERG), A., ii, 502.
variation of the resistance of, in a feeble magnetic field (CARPINI), A., ii, 72.
temperature-coefficient of the resistance of (STREINTZ), A., i, 432.
magnetisation coefficient of (MESLIN), A., ii, 228.
diamagnetism of (LEDUC), A., ii, 371.
crystalline, thermal conductivity of (PERROT; CAILLER), A., ii, 10.
colloidal (GUTBIER and HOFMEIER), A., ii, 327.
Bismuth alloys with aluminium, properties of (PÉCHEUX), A., ii, 526.
with antimony (HÜTTNER and TAMMANN), A., ii, 327.
with copper (HIORNS), A., ii, 461.

Bismuth salts, anodic decomposition during the electrolysis of (Bose), A., ii, 299.
Bismuth nitride (Franklin), A., ii, 583.
complex nitrites (Ball), T., 761 ; P., 129.
phosphate, molecular weight of (Rügheimer), A., ii, 576.
telluride (Mönkemeyer), A., ii, 828.
Bismuth, estimation of, by precipitation as molybdate (Miller and Cruser), A., ii, 358.
Bis-1-phenyl-5-methyl-3-triazole (Rinman), A., i, 388.
Bisphenylphthalazonylethane and its *di-p*-nitro- and *di*nitronitroso-derivatives (Reissert and Engel), A., i, 899.
Bis-1- and **-5-phenyl-3-triazoles** (Rinman), A., i, 387.
Bis-5-*iso*propyl-3-triazole and its salts and 1-acetyl derivative (Rinman and Stahl), A., i, 388.
3-Bis-5-thio-1-phenylpyrazolone-4-*p*-azotoluene (Michaelis and Simon), A., i, 396.
Bistriazole compounds (Rinman), A., i, 387.
Bis-3-triazole and its salts and 5-hydroxy- (Rinman), A., i, 388.
Bis-3-triazole-5-carboxylic acid and its potassium salt and benzoyl and acetyl derivatives (Rinman), A., i, 389.
Bitumen, detection and estimation of, in gutta percha (Pontio), A., ii, 362.
Biuret cadmium chloride (Schenck), A., i, 28.
*di*thio-, persubstituted (Billeter and Rivier), A., i, 49.
Biuret-acetic acid, isomeric amides and ethyl ester of (Eppinger), A., ii, 336.
Bleaching powder, formation and constitution of (Tarugi), A., ii, 32.
red coloration of (Tarugi), A., ii, 163.
Blendes, estimation of zinc in (Pattinson and Redpath), A., ii, 356.
Blood, composition of, in disease (v. Rzentkowski), A., ii, 337.
composition of, in cases of *Tuberculosis pulmonum*, *Carcinoma ventriculi*, *Diabetes mellitus*, *Saturnismus chronicus*, and *Typhus abdominalis* (Erben), A., ii, 741.
spectroscopy of (Vila and Pietre), A., i, 621 ; ii, 402.
action of light on mixtures of eosin and (Pfeiffer), A., ii, 465.
measurement of the electrical conductivity of (Wilson), A., ii, 264.
Blood, electrical conductivity of, during coagulation (Frank), A., ii, 835.
changes in the viscosity of, produced by alcohol (Burton-Opitz), A., ii, 98.
changes in the viscosity of, during narcosis (Burton-Opitz), A., ii, 540.
behaviour of sodium fluoride towards (Toyonaga), A., ii, 332.
alkalinity of (Landau), A., ii, 330.
coagulation of (Loeb), A., ii, 330.
effect of phosphorus on the coagulation of (Doyon, Morel, and Kareff), A., ii, 402.
osmotic pressure of, in fishes (Dekhuyzen), A., ii, 836.
absorption coefficients of, for gases (Bohr), A., ii, 729.
human, power of, to decompose hydrogen peroxide (Silbergleit and Mosse), A., ii, 178.
determining the plasma condition in, in erythema (Erben), A., ii, 741.
effect of acids on (Ham and Baleau), A., ii, 402.
alcohol and acetone in (Maignon), A., ii, 406.
colouring matter of (Goldmann and Marchlewski ; Buraczewski and Marchlewski), A., i, 399 ; (Goldmann, Hepter, and Marchlewski), A., i, 725.
or their products of decomposition, new reagent for the detection of (Riegler), A., ii, 128.
glycuronic acid of (Lépine and Boulud), A., ii, 730.
invertin in (Weinland), A., ii, 730.
proteids of (Morawitz), A., ii, 837.
estimation of catalase (Jolles), A., ii, 215.
estimation of iron in, colorimetrically (Jolles), A., ii, 67, 206.
Blood changes following anti-typhoid inoculation (Leishman, Harrison, Smallman, and Tulloch), A., ii, 599.
in plague (Rogers), A., ii, 338.
Blood circulation in man, investigations on the (Loewy and v. Schrötter), A., ii, 401.
Blood corpuscles, influence of the concentration of, and the form of the reagent vessel, on hæmolysis by chemical reagents (Vandevelde), A., ii, 836.
preparation and properties of protoplasmic extracts of (A. and L. Lumière and Chevrotier), A., ii, 642.

Blood corpuscles and plasma, distribution of saccharine matters in (LÉPINE and BOULUD), A., ii, 642.
fœtal, resistance of (VANDEVELDE), A., ii, 836.
laked, hæmolysinogenic and agglutininogenic action of (STEWART), A., ii, 47.
red, Koeppe's hypothesis of the nature of (GRYNS), A., ii, 729.
action of fluorescent substances on (PFEIFFER), A., ii, 465.
rate of hæmolysis of (CERNOVODEANU), A., ii, 465.
laking of (KOEPPE), A., ii, 331.
of birds, nuclei of (ACKERMANN), A., ii, 98.
estimation of the volume of (KOEPPE), A., ii, 331.
Blood-discs, composition of the stroma of, and hæmolysis (PASCUCCI), A., ii, 729.
Blood ferments (JOLLES and OPPENHEIM), A., ii, 265, 600.
Blood-fibrin, glycolytic principle of (SIEBER), A., ii, 541.
Blood gases, apparatus for use in the analysis of (BARCROFT), A., ii, 551.
Blood-plasma, chemical changes in, after injection of Bacteria (MULLER), A., ii, 468.
absorption coefficients of, for gases (BOHR), A., ii, 729.
Blood-pressure, effects of salts of potassium and ammonium and of bile salts on (EDMUNDS), A., ii, 264.
effect of intravenous injections of bile on (MELTZER and SALANT), A., ii, 836.
effect of chloroform on (SCHÄFER and SCHARLIEB), A., ii, 105; (EMBLEY and MARTIN), A., ii, 264.
effect of polypeptides on (HALLIBURTON), A., ii, 265.
effect of proteolytic products on (WOLF), A., ii, 264.
Blood serum, opsonic content of, in health and in lupus (BULLOCK), A., ii, 844.
Blood stains, detection of (RIEGLER), A., ii, 128.
Body, chemical correlation of the functions of the (STARLING), A., ii, 735.
estimation of the gases set free in the, after rapid decompression from high atmospheric pressures (HAM and HILL), A., ii, 728.
Boiler deposits (ROTHSTEIN), A., ii, 389.
Boiling point in vacuum—a new constant and its meaning (KRAFFT), A., ii, 144.
Boiling point apparatus (GIBBS), A., ii, 570.
Boiling points of normal fatty alcohols and nitriles (HENRY), A., i, 561.
of esters, influence of water and alcohols on the (WADE), T., 1656; P., 240.
of homologous compounds (YOUNG), A., ii, 231.
Bombyx mori, influence of sex on the nutrition of, in the last stages of its metamorphosis; localisation of glycogen, fat, and soluble albumin in the course of nymphosis (VANEY and MAIGNON), A., ii, 406, 467.
Bone, influence of alkalis on the growth of (ARON), A., ii, 100.
Bone-dust, is the availability of phosphoric acid in, modified by the presence of gypsum? (KATAYAMA), A., ii, 347.
Bone-marrow, chemical changes in, after intraperitoneal injection of Bacteria (MULLER), A., ii, 468.
extracts, intravenous injection of (BROWN and GUTHRIE), A., ii, 745.
Boric acid and **Borides**. See under Boron.
Borneol (m.p. 204°) and its acetate from *Abies sibirica* (GOLUBEFF), A., i, 74.
*iso***Borneol** (BOUVEAULT and BLANC), A., i, 222.
oxidation of, to camphor (CHEMISCHE FABRIK AUF AKTIEN), A., i, 362, 709.
Bornylcarbiminocamphor (FORSTER and FIERZ). T., 829; P., 178.
Bornyl-dixanthide and **-xanthic acid**, esters and amide of (TSCHUGAEFF), A., i, 73.
Boron *tri*fluoride, preparation and some physical constants of pure (MOISSAN), A., ii, 26.
Borides, preparation of (JÜNGST & MEWES), A., ii, 316.
Boric acid, occurrence of, in common salt (HEFELMANN), A., ii, 652.
action of, on the alkali peroxides (JAUBERT), A., ii, 26.
detection of (CASTELLANA), A., ii, 420; (MEZGER; GOSKE), A., ii, 764.
detection and estimation of, in butter (MONHAUPT), A., ii, 354.
detection of, in foods (v. SPINDLER), A., ii, 480; (SELLIER), A., ii, 554.
estimation of (WINDISCH; VAUBEL and BARTELT), A., ii, 554; (BEYTHIEN), A., ii, 765.

Boron :—
Boric acid suffioni of Tuscany, radioactivity of the, and the amount of the emanation contained therein (NASINI, ANDERLINI, and LEVI), A., ii, 786.
Perborates, formation of (JAUBERT), A., ii, 26; (MELIKOFF; BRUHAT and DUBOIS), A., ii, 246.
Bournonite from Arizona (SCHALLER), A., ii, 725.
Bowel, action of chloroform on the blood-vessels of the (EMBLEY and MARTIN), A., ii, 264.
Brain, cholesterol esters in the (BÜNZ), A., ii, 841.
tissue and lecithin, production of choline from (CORIAT), A., ii, 47.
vessels, action of epinephrine on (WIGGERS), A., ii, 846.
Bran, influence of, on the estimation of gluten and on the suitability of flour for bread-making (LINDET and AMMANN), A., ii, 780.
Brandies, wine, composition of (ROCQUES), A., ii, 275.
Brandy, some conditions affecting the ester value of (SCHIDROWITZ and KAYE), A., ii, 486.
colorimetric estimation of higher alcohols in (ROCQUES), A., ii, 359.
Brazilin and hæmatoxylin (HERZIG and POLLAK), A., i, 605.
Bread, detection of sawdust in (PAGANINI), A., ii, 360.
Bread-making, proteids of wheat gluten and its relations to baking properties of wheat flour (KÖNIG and RINTELEN), A., ii, 113.
Bromal monohydrobromide (VORLÄNDER and SIEBERT), A., i, 792.
Bromanil. See *p*-Benzoquinone, *tetra*-bromo-.
Bromates. See under Bromine.
Bromine, electromotive behaviour of (BOERICKE), A., ii, 222.
solubility of, in solutions of potassium bromide (WORLEY), T., 1107; P., 209.
replacement of hydroxyl by (PERKIN and SIMONSEN), T., 855; P., 188.
Bromine fluoride (PRIDEAUX), P., 240.
Bromates, estimation of (SCHOLTZ), A., ii, 651.
Bromine, detection of, in presence of much iodine (CORMIMBOEUF), A., ii, 416.
and chlorine, estimation of small proportions of, in iodine (TATLOCK and THOMSON), A., ii, 281.
chlorine, and iodine, new method for the estimation of mixtures of (WENTZKI), A., ii, 478.
Bromine, estimation of, in bromates (JANNASCH and JAHN), A., ii, 416.
Bromo-compounds, action of magnesium organic compounds on (KOHLER and JOHNSTIN), A., i, 215.
Bronzes, tempering of (GUILLET), A., ii, 168.
Brucine, thermochemistry of (BERTHELOT and GAUDECHON), A., ii, 301, 441.
oxide (PICTET and MATTISSON), A., i, 816.
separation of, from strychnine (HOWARD), A., ii, 779.
Brucine, *hexa*chloro-, and its hydrochloride (MINUNNI and CIUSA; CORONEDI), A., i, 230.
Bunsen burner with sieve attachment (ALLIHN), A., ii, 81.
flame, experimental demonstration of the structure of the (HABERMANN), A., ii, 693.
Burette, new (IWANOFF), A., ii, 349.
a new, for testing normal solutions (HESSE), A., ii, 55.
Burettes, gas, modified (ZRZAWY), A., ii, 55.
Burner, Bunsen. See Bunsen burner.
Burners, new laboratory, and their adaptation to the production of high temperatures (MÉKER), A., ii, 142.
Butadiene compounds (STOBBE, GADEMANN, LENZNER, and ROSE; STOBBE and LEUNER), A., i, 857.
aδ-dibromide (WILLSTÄTTER and v. SCHMAEDEL), A., i, 514.
Butadienedicarboxylic acids. See Fulgenic acids.
n-**Butaldehyde**, condensation of, by means of dilute sulphuric acid (GORHAN), A., i, 171.
*tetra*bromo- (FREUNDLER), A., i, 569.
iso-**Butaldehyde**, condensation of, with methylethylacraldehyde (MORAWETZ), A., i, 262.
Butane, *s-cis-* and *-trans-tetra*bromo-, preparation of (PERKIN and SIMONSEN), T., 856; P., 188.
See also *β*-Methylpropane.
iso-**Butane**, *tri*bromo-derivatives (POGORŽELSKY), A., i, 315.
cyclo-**Butane**, derivatives of (WILLSTÄTTER and v. SCHMAEDEL), A., i, 514.
1:1-*di*bromo- (KIJNER), A., i, 355.
dicyclo-**Butane** derivatives, synthesis of (PERKIN and SIMONSEN), P., 256.
cyclo-**Butane-1-carboxylamide**, 1-bromo- (KIJNER), A., i, 355.
Butanedicarboxylic acids. See Adipic acid, Methylglutaric acid, and Propylmalonic acid.
cyclo-**Butane-1:1-dicarboxylic acid**, ethyl ester, preparation of (KIJNER), A., i, 786.

cyclo-**Butanone** and its semicarbazone (KIJNER), A., i, 355.

cyclo-**Butene** and its bromo-derivatives (WILLSTÄTTER and v. SCHMAEDEL), A., i, 514.

Butenoic acids. See Crotonic acids, Methylacrylic acid, and Vinylacetic acid.

Butinene. See Erythrene.

Butter, mean molecular weight of the non-volatile acids of Dutch (OLIG and TILLMANS), A., ii, 212.

analysis of (HOTON), A., ii, 426; (POLENSKE), A., ii, 870.

detection and estimation of boric acid in (MONHAUPT), A., ii, 355.

detection of rancidity in (SOLTSIEN), A., ii, 774.

detection of sesamé oil in (SPRINKMEYER and WAGNER), A., ii, 775.

estimation of the volatile fatty acids in (JENSEN), A., ii, 772.

estimation of fat in (HESSE), A., ii, 125.

estimation of fat in, by the Gottlieb-Röse method (BURR), A., ii, 774.

estimation of fat and water in, by Gerber's method (HESSE), A., ii, 869.

Butters of various origin, amount of water in, and their Reichert-Meissl numbers (THEODOR), A., ii, 361.

Butter fat, estimation of, in margarine (KIRSCHNER), A., ii, 213.

sec.-**Butyl alcohol,** *aci-di*nitro-, and its potassium salt (DUDEN and PONNDORF), A., i, 558.

Butyl iodochlorides, *n*- and *sec.*- (THIELE and PETER), A., i, 736.

sec.-**Butylacetic acid.** See β-Methylvaleric acid.

iso-**Butylacetoacetaldehyde** and its copper salt (COUTURIER and VIGNON), A., i, 571.

Butylacetoacetamides, *n*- and *iso*- (GUARESCHI), A., i, 822.

sec.-**Butylacetoacetic acid,** ethyl ester, and its reactions (BOUVEAULT and LOCQUIN), A., i, 636.

Butylacetoacetic acids, *n*- and *iso*-, amino-, ethyl esters (GUARESCHI), A., i, 822.

α-**Butylacrylic acid** and its salts, chloride, anilide, and phenylhydrazide (BLAISE and LUTTRINGER), A., i, 628.

sec.-**Butylamine** and its carbonate and hydrochloride (MAILHE), A., i, 635.

tert.-**Butylamine,** *N*-acetyl derivative and its hydrochloride (SCHOLL, WEIL, and HOLDERMANN), A., i, 182.

iso-**Butylamine,** action of, on cæsium (RENGADE), A., i, 634.

tert.-**Butylcarbinol** and its iodide (MEYERSBERG), A., i, 166.

l-**Butylconiine** and its isomeric iodides (SCHOLTZ), A., i, 297.

n-**Butyldibenzyl ketone,** chloro- (HERTZKA), A., i, 292.

cyclo-**Butyldiethyl-carbinol** and **-methane** (KIJNER and AMOSOFF), A., i, 772.

cyclo-**Butyldimethylamine** and its aurichloride and picrate (WILLSTÄTTER and v. SCHMAEDEL), A., i, 514.

cyclo-**Butyldimethylcarbinol** and its transformations (KIJNER), A., i, 772.

iso-**Butylene,** action of bromine on (POGORŽELSKY), A., i, 315.

action of chlorine on (POGORŽELSKY), A., i, 165.

addition of iodine chloride to (ISTOMIN), A., i, 165.

iso-**Butylene alcohol,** bromo- (POGORŽELSKY), A., i, 315.

Butylenedicarboxylic acid. See β-Methylglutaconic acid.

α-**Butylglutaric acid,** γ-cyano-, ethyl ester (BLAISE and LUTTRINGER), A., i, 628.

β-*iso*-**Butylglutaric acid** and αα-*di*cyano- (KNOEVENAGEL), A., i, 169.

iso-**Butyl-hydantoic acid** and **-hydantoin** (HUGOUNENQ and MOREL), A., i, 178, 332.

α-**Butylhydracrylic acid** and its benzylamine salt and ethyl ester (BLAISE and LUTTRINGER), A., i, 505.

iso-**Butylidene-diacetamide** and **-diformamide** (REICH), A., i, 35.

iso-**Butylidenelævulic acid** and its ethyl ester, salts, and dibromide (MEINGAST), A., i, 319.

α-**Butylpropionic acid.** See Methylhexoic acid.

ψ-*iso*-**Butylthiocarbamide** hydrobromide (WHEELER and BRISTOL), A., i, 482.

m-*iso*-**Butyltoluene** (NIEMCZYCKI), A., i, 579.

cyclo-**Butyltrimethylammonium** hydroxide and iodide (WILLSTÄTTER and v. SCHMAEDEL), A., i, 514.

Butyric acid, α-amino-, derivatives of (FISCHER and RASKE), A., i, 693.

α-bromobutyryl derivatives, isomeric (FISCHER and RASKE), A., i, 693.

β-bromo-, and its amide and ethyl ester (LESPIEAU), A., i, 9.

β-hydroxy-, estimation of, in urine (RYFFEL), A., ii, 559.

α-nitro-, ethyl ester, and its ammonium and sodium derivatives (ULPIANI), A., i, 9.

*iso***Butyric acid**, α-bromo-, action of bromine and alkali hydroxide on (KIJNER), A., i, 332.
Butyroin and its derivatives (BOUVEAULT and LOCQUIN), A., i, 560, 572.
Butyrometer, "sinacid" (DU ROI and KÖHLER), A., ii, 125; (MOLKEREITECHN. INST. SICHLER & RICHTER), A., ii, 361; (SCHNEIDER), A., ii, 560.
Butyrospermum Parkii. See Karite tree.
Butyryl chloride, α-amino-, hydrochloride of (FISCHER and REUTER), A., i, 264.
α-bromo- (FISCHER and RASKE), A., i, 693.
Bye laws, suggested alteration of the, P., 41.

C.

Cachalot oil (FENDLER), A., ii, 491.
Cacodylic acid, barium salt, preparation of (ANNONI), A., i, 758.
Cadaverine. See Pentamethylenediamine.
Cadmium, atomic weight of (BAXTER and HINES), A., ii, 321.
Cadmium alloys with silver, properties of (ROSE), A., ii, 86.
Cadmium iodide, dissociation of (MCBAIN), A., ii, 371.
*di*nitrate, $Cd(NO_3)_2,4H_2O$, co-ordinates of the melting point curve, change of volume, and heat of crystallisation of, in relation to pressure (PUSHIN), A., ii, 587.
Cadmium, electrolytic estimation of (FLORA; DAVISON), A., ii, 859.
Cadmium hureaulite, artificial production of (DE SCHULTEN), A., ii, 175.
Cæsamide (RENGADE), A., ii, 388, 521.
Cæsium, preparation of (HACKSPILL), A., ii, 585.
Cæsium oxides (RENGADE), A., ii, 521.
uranyl sulphate, double (OECHSNER DE CONINCK), A., ii, 395.
*penta*sulphide (BILTZ and WILKE-DÖRFURT), A., ii, 162.
Cæsium *iso*butylamide, *iso*ethylamide, and ethylammonium (RENGADE), A., i, 634.
methylamide (RENGADE), A., i, 174.
Cæsium-ammonium, action of oxygen on (RENGADE), A., ii, 521.
Caffeine, estimation of (PUCKNER), A., ii, 872.
Caffeine diuresis, mechanism of (LOEWI, FLETCHER, and HENDERSON), A., ii, 739.
Caisson sickness, oxygen inhalation as a means of preventing (HAM and HILL), A., ii, 728.
Cajeput oil. See Kajeput oil.
Calcite, reactions for distinguishing dolomite and (THUGUTT), A., ii, 421.
Calcium, metallic, preparation of, in the laboratory (WÖHLER), A., ii, 708.
physical constants of (ARNDT), A., ii, 87; (MOISSAN and CHAVANNE), A., ii, 163.
metallic, properties of (ARNDT), A., ii, 87.
uses of (BECKMANN, BECK, and SCHLEGEL), A., i, 335.
amount of, in animal organs (TOYONAGA), A., ii, 335.
and magnesium, inter-relationship of the excretion of (MALCOLM), A., ii, 271.
manurial action of different forms of (MEYER), A., ii, 197.
Calcium alloys with aluminium (ARNDT), A., ii, 453.
with mercury (*calcium amalgam*), some physical constants of (MOISSAN and CHAVANNE), A., ii, 163.
Calcium salts, equilibrium of other salts with, in the formation of oceanic salt deposits (VAN'T HOFF and BLASDALE), A., ii, 641.
and magnesium salts, importance of, for plants (GÖSSEL), A., ii, 51.
Calcium carbide, commercial, reaction of ammonia with (SALVADORI), A., i, 513.
interaction of, with lead oxide (PRING), T., 1538; P., 231.
as an explosive in mining operations (GUÉDRAS), A., ii, 87.
carbonate, behaviour of, towards cobalt salts, and precipitation of (MEIGEN), A., ii, 454.
solubility of, in solutions of ammonium nitrate (BERJU and KOSINENKO), A., ii, 62.
alkaline reaction of (BLUM), A., ii, 163.
estimation of, in soils (MONTANARI), A., ii, 204.
chloroborates (OUVRARD), A., ii, 635.
hydride and nitride, heat of formation of (GUNTZ and BASSETT), A., ii, 300.
hydroxide, solubility of, in aqueous glycerol (HERZ and KNOCH), A., ii, 709.
and sulphur, reaction of a mixture of, with water and salt (HAYWOOD), A., ii, 312.
*per*manganate, action of, on alkaloids (BAUDRAN), A., ii, 107.
action of, on tetanic and diphtheritic toxins and on tuberculin (BAUDRAN), A., ii, 407.
nitrate as manure (BELLENOUX), A., ii, 478.

Calcium nitrite and its decomposition by heat (RÂY), T., 178.
oxide (*lime*) and magnesia, solubility of, in solutions of sodium chloride; estimation and separation of (MAIGRET), A., ii, 482.
estimation of, in burnt lime (BERJU and KOSINENKO), A., ii, 62.
estimation of sulphur in (HARTWIGSSON), A., ii, 552.
phosphates, action of water on (CAMERON and SEIDELL), A., ii, 33.
silicate (BENZIAN), A., ii, 523.
sulphate in ammonium sulphate solution (SULLIVAN), A., ii, 453.
solubility of, in solutions of other salts (CAMERON and BROWN), A., ii, 388.
relationships between the solubility of, and the hydration of gypsum and of Portland cement (ROHLAND), A., ii, 319.
influence of, on the decomposition of starch and albumin in the mashing process (WINDISCH and BODEN), A., ii, 188.
See also Gypsum.
Pentacalcium potassium sulphate, temperature of formation of (VAN'T HOFF, VOERMAN, and BLASDALE), A., ii, 319.
Calcium cyanamide, decomposition of (LÖHNIS), A., ii, 412.
as manure (PEROTTI), A., ii, 196, 870; (OTTO), A., ii, 196; (ZIELSTORFF), A., ii, 477; (HASELHOFF), A., ii, 650.
use of peat for the transformation of, into ammoniacal compounds (PEROTTI), A., ii, 278.
Calcium, rapid estimation of (SCHULTZE), A., ii, 482.
barium, and strontium, estimation of, in presence of one another (BRILL), A., ii, 522.
estimation and separation of, in presence of phosphoric acid (JÄRVINEN), A., ii, 62.
Calculus, a prehistoric Egyptian (SHATTOCK), A., ii, 843.
Calculus-cystine. See under Cystine.
Californite from California (CLARKE and STEIGER), A., ii, 725.
Calliphora vomitoria (meat fly), metabolic changes during the metamorphosis of the (WEINLAND), A., ii, 734.
excretion of ammonia by the larvæ of (WEINLAND), A., ii, 740.
Calomel. See Mercurous chloride under Mercury.
Calophyllum Inophyllum, oil from the seeds of (FENDLER), A., ii, 277.
Calorimeters. See under Thermochemistry.
Calycanthine, the crystalline alkaloid of *Calycanthus glaucus*, and its salts (GORDIN), A., i, 295.
Camphene (BOUVEAULT and BLANC), A., i, 222.
formula of (MOYCHO and ZIENKOWSKI), A., i, 710.
Camphene (m.p. 40–41°) from *Abies sibirica* (GOLUBEFF), A., i, 74.
Camphene glycol, benzoates of (MOYCHO and ZIENKOWSKI), A., i, 711.
hydroxyoxide and its benzoate (MOYCHO and ZIENKOWSKI), A., i, 711.
Camphenecamphoric acid and its diamide, dianilide, dinitrile, and carbamate (MOYCHO and ZIENKOWSKI), A., i, 712.
Camphenecamphoryldiamine (MOYCHO and ZIENKOWSKI), A., i, 712.
Camphenilic acid and its acetyl and benzoyl derivatives (MOYCHO and ZIENKOWSKI), A., i, 712.
Camphenilone and its dichloride (BOUVEAULT and BLANC), A., i, 222; (MOYCHO and ZIENKOWSKI), A., i, 712.
Camphenonecamphenoic acid (ODDO), A., i, 449.
Campholide, formation of (BLANC), A., i, 683.
β-Campholide (HALLER and BLANC), A., i, 858.
Camphopyric acid, bromo-derivatives, and their salts (GARDNER), T., 1516; P., 230.
trans-bromo-, properties of the crystals of (GRAHAM), T., 1525.
Camphopyric anhydride, bromo-, preparation and reactions of (GARDNER), T., 1516; P., 230.
properties of the crystals of (GRAHAM), T., 1527.
Camphor (BOUVEAULT and BLANC), A., i, 222.
preparation of, from isoborneol (CHEMISCHE FABRIK AUF AKTIEN), A., i, 362, 709.
heat action of (HESEHUS), A., ii, 297.
action of, on the circulation (SELIGMANN), A., ii, 409; (BÖHME), A., ii, 410.
Camphor, α-bromo- and α-chloro-, isomerism of (KIPPING), P., 125.
cyano-, constitution of (HALLER and MULLER), A., i, 112.
α-imino- (FORSTER and FIERZ), T., 828; P., 178.

Camphor, *iso*nitroso-, and its unstable modification, and oximes, oximeanhydride, and anhydrides (Forster), T., 232; P., 22.
*per*nitroso-, constitution of the group, N_2O_2, in (Angelucci), A., i, 801.
l-**Camphor** (b.p. 204°) from the borneol from *Abies sibirica* (Golubeff), A., i, 74.
Camphoracetic acid (Haller), A., i, 602.
cyano-, and its esters, salts, and amide (Haller and Couréménos), A., i, 533.
Camphoramic acids, α- and β-, β- and α-methyl esters (Haller and Blanc), A., i, 858.
Camphor*iso*butyric acid, α-cyano-, and its esters and salts (Haller and Couréménos), A., i, 533.
Camphoric acid (Noyes), A., i, 322.
d-**Camphoric acid**, mixed derivatives of (Haller and Blanc), A., i, 858.
Camphoroxalic acid and its salts and condensation products with amines (Tingle and Hoffmann), A., i, 799.
Camphorpropionic acid, α-cyano-, and its esters and salts (Haller and Couréménos), A., i, 533.
β-**Camphorpropionic acid** (Haller), A., i, 602.
Camphorquinone and its hydrazones and oximes, structure of, in relation to their optical properties (Armstrong and Robertson), T., 1272; P., 180.
refractive and magnetic rotatory power of (Perkin), T., 1292.
Camphorquinone*mono*imine. See Camphor, α-imino-.
Camphorquinonephenylhydrazone, solubility of (Robertson), T., 1298; P., 181.
Camphorsulphonic acid, *d*-bromo- and *d*-chloro-, isomeric forms of (Kipping), T., 628; P., 124.
d-**Camphor-β-sulphonyl-*p*-nitroaniline**, and **-*p*-phenylenediamine** and its diazoimide and azo-β-naphthol derivative (Morgan and Micklethwait), T., 77.
Camphorylazoimide and its reactions (Forster and Fierz), T., 826; P., 178.
s-**Camphoryl-bornyl-** and **-piperidyl-carbamides** (Forster and Fierz), T., 119; P., 22.
Camphorylcarbamic acid, methyl and ethyl esters (*camphoryl-methyl-* and *-ethyl-urethanes*) (Forster and Fierz), T., 121.
Camphoryl-ψ-carbamide and its oxime, and nitroso- and methyl derivatives (Forster and Fierz), T., 113; P., 22.
Camphorylcarbimide (*camphoryl* iso*cyanate*) (Forster and Fierz), T., 110; P., 21.
Camphoryl-ψ-semicarbazide and its condensation with aldehydes and ketones and its nitrate, cuprinitrate, and anhydride (Forster and Fierz), T., 722; P., 151.
action of nitrous acid on, in acetic acid (Forster and Fierz), T., 835.
α-**Camphylcarbamide** and its aryl substituted derivatives and α-**Camphylcarbimide** (Forster and Fierz), T., 736.
1-Camphyl-2:5-dimethylpyrrole and its **3:4-dicarboxylic acid** and its ethyl ester and salts (Bülow), A., i, 231.
Cancer, chemistry of (Neuberg), A., ii, 338.
hydrochloric acid in the gastric juice in (Moore), A., ii, 741.
See also Malignant growths and Tumours.
Cannon ball from the moat of the Bastille, composition of a (Porlier), A., ii, 713.
Caoutchouc (*indiarubber*), varieties of (Harries), A., i, 223.
constitution and decomposition of (Harries), A., i, 364.
action of radium rays on (Ditmar), A., ii, 72.
coagulation and solubility of (Weber), A., i, 363.
colloidalising action of, on selenium (Ditmar), A., ii, 701.
nitrosite and its use for the analysis of crude caoutchoucs and caoutchouc products (Harries; Alexander), A., i, 223.
ozonide (Harries), A., i, 364.
Mikindani-caoutchouc from German East Africa, albans of (Tschirch and Müller), A., i, 453.
Caoutchouc wares, analysis of (Esch and Chwolles), A., ii, 362.
Capillary layer, thickness and tension of the (Bakker), A., ii, 304.
pyknometer (Erben), A., ii, 741.
Caproin (Bouveault and Locquin), A., i, 560.
Carbamates, estimation of, in urine (Macleod and Haskins), A., ii, 123.
Carbamic acid, condensation of, with natural leucine (Hugounenq and Morel), A., i, 178.

Carbamic acid, ethyl ester, condensation of, with esters (DIELS and HEINTZEL), A., i, 174.
Carbamide, theory of the formation of (EPPINGER), A., i, 579.
solubility and heat of solution of (KRUMMACHER), A., i, 266.
chemical changes attending the aërobic bacterial fermentation of (ADENEY), A., ii, 340.
reaction of, with esters of dialkylcyanoacetic acids (MERCK), A., i, 178, 179.
action of phosphorus pentasulphide on (v. HEMMELMAYR), A., i, 495.
action of sodium hypochlorite on (SCHESTAKOFF), A., i, 332.
in Fungi (GAZE), A., ii, 277.
See also Urea.
Carbamide, *iso*hydroxy-, condensation of, with benzaldehyde (CONDUCHÉ), A., i, 289.
thio-. See Thiocarbamide.
*iso***Carbamides** (STIEGLITZ and NOBLE), A., i, 639.
1-Carbamido-2:5-dimethylpyrrole-3:4-dicarboxylic acid and its ethyl ester (BÜLOW, RIESS, and SAUTERMEISTER), A., i, 661.
Carbamidoglycuronic acid and its barium salt (NEUBERG and NEIMANN), A., i, 411.
β-Carbamidohydrocinnamic acid (POSNER), A., i, 578.
Carbanilide, thio-. See Thiocarbanilide.
C-**Carbanilides**, formation of (DIECKMANN, HOPPE, and STEIN), A., i, 135.
Carbanilidobenzene-azo- and **-hydrazo-*p*-cresols** and their chloro-derivatives (GOLDSCHMIDT and LÖW-BEER), A., i, 390.
Carbanilido-*p*-hydroxyazobenzene (GOLDSCHMIDT and LÖW-BEER), A., i, 389.
Carbanilido-5-hydroxy-2-methylbenzidine (GOLDSCHMIDT and LÖW-BEER), A., i, 390.
Carbanilido-*p*-toluene-azo- and **-hydrazo-*p*-cresols** (GOLDSCHMIDT and LÖW-BEER), A., i, 390.
Carbethoxy-alanine and its ethyl ester, amide, and chloride, and **-alanylglycine** and its ethyl ester and amide (FISCHER and AXHAUSEN), A., i, 689.
trans-**α-Carbethoxyamino-β-ψ-ethylthiocarbamideacrylic acid** (JOHNSON), A., i, 835.
5-Carbethoxyamino-6-hydroxy- and **-6-oxy-2-ethylthiolpyrimidines** (JOHNSON), A., i, 835.
Carbethoxyleucylalanine (FISCHER and WARBURG), A., i, 691.
Carbethoxyleucylglycine (FISCHER and BRUNNER), A., i, 690.
α-Carbethoxy-β-methylglutaconamide, ethyl ester (ROGERSON and THORPE), T., 1692.
Carbethoxyphenylhydroresorcinylacetic acid and its isomeride (REINICKE), A., i, 787.
β-Carbethoxyphenylpropionic acid, 3:5-*di*nitro-2-amino-, and its ethyl ester (VAN DORP), A., i, 81.
Carbimides, optically active (PICKARD, LITTLEBURY, and NEVILLE), P., 286.
thio-. See Thiocarbimides.
Carbodiglycollic acid, *di*thio-, and its ethyl ester and salts (HOLMBERG), A., i, 324.
Carbohydrate combustion in the animal organism (STOKLASA), A., ii, 179.
diet, influence of, on the composition of the child (STEINITZ and WEIGERT), A., ii, 180.
group in proteids (LANGSTEIN), A., i, 496.
metabolism. See under Metabolism.
Carbohydrates of marine Algæ and their products (KÖNIG and BETTELS), A., ii, 851.
from serum globulins (LANGSTEIN), A., i, 555.
action of hydrogen peroxide on, in presence of ferrous sulphate (MORRELL and BELLARS), T., 280; P., 79.
relationship between, and the nitrogenous products of metabolism (KNOOP and WINDAUS), A., i, 509.
utilisation of, without intervention of alimentary digestion processes (MENDEL and MITCHELL), A.. ii, 733.
behaviour of, in autolysis (NEUBERG and MILCHNER), A., ii, 45.
reactions of (R. and O. ADLER), A., ii, 360.
See also Sugars.
Carbon, fundamental conceptions underlying the chemistry of the element (NEF), A., i, 109.
atomic weight of (PARSONS), A., ii, 710.
atomic weight of, deduced from its density (GUYE), A., ii, 442.
tervalency of (TSCHITSCHIBABIN), A., i, 125.
basic properties of (v. BAEYER), A., i, 281, 358.
new allotropic form of, and its heat of combustion (MIXTER), A., ii, 519.

Carbon, mutual relationships of the different modifications of (SCHENCK and HELLER), A., ii, 519.
temperature coefficient of electrical resistivity of, at low temperatures (MORRIS-AIREY and SPENCER), A., ii, 668.
double linking, nature of the (BAUER), A., i, 729.
doubly-linked, relation of, to nitrogen, oxygen, and sulphur (DECKER, BÜNZLY, v. FELLENBERG, KLAUSER, and WISLOCKI), A., i, 667.
evolution of, in fuels (BAY and ALIX), A., ii, 246.
Carbon *tetra*bromide, preparation and purification of (v. BARTAL), A., ii, 450.
action of sulphur on (v. BARTAL), A., ii, 704.
*mono*xide (*carbonic oxide*), action of ultra-violet light on moist and dried mixtures of oxygen and (CHADWICK, RAMSBOTTOM, and CHAPMAN), P., 287.
coefficient of expansion and molecular weight of (JAQUEROD and PERROT), A., ii, 507.
action of, on ammonia (JACKSON and NORTHALL-LAURIE), T., 433 ; P., 118.
action of, on silver oxide (DEJUST), A., ii, 453.
detection of traces of, in the atmosphere (DEJUST), A., ii, 453.
estimation of, in confined atmospheres (LÉVY and PÉCOUL), A., ii, 203.
*di*oxide (*carbonic anhydride*), apparatus for preparing (ARZBERGER), A., ii, 21 ; (ÜBEL), A., ii, 239 ; (ECKART), A., ii, 515.
infra-red absorption spectrum of, as affected by pressure (SCHAEFER), A., ii, 129.
refractive index of, in the infra-red (KOCH), A., ii, 661.
Joule-Thomson effect in (KESTER), A., ii, 303.
specific heat of, at high temperatures (HOLBORN and AUSTIN), A., ii, 228.
coefficient of expansion and molecular weight of (JAQUEROD and PERROT), A., ii, 507.
effect of mechanical vibration on, near the critical temperature (BRADLEY, BROWNE, and HALE), A., ii, 75.
density of (GUYE and PINTZA), A., ii, 506.
Carbon *di*oxide (*carbonic anhydride*), vapour density of, at 2000° (EMICH), A., ii, 441.
dissociation of (NERNST and v. WARTENBERG), A., ii, 629 ; (EMICH), A., ii, 803.
tension of, in sea water and in the atmosphere (KROGH), A., ii, 26.
absorption of, by aqueous salt solutions and binary liquid mixtures (CHRISTOFF), A., ii, 806.
validity of the law of corresponding states for mixtures of methyl chloride and (KAMERLINGH ONNES and ZAKRZEWSKI), A., ii, 149.
union of, with amphoteric amino-substances (SIEGFRIED), A., ii, 332.
action of, on the carbonates and hydroxides of the metals of the alkalis and alkaline earths (RAIKOW), A., ii, 85.
decomposition of, by magnesium (BRUNNER), A., ii, 381.
influence of water vapour on the reduction of, by carbon (BOUDOUARD), A., ii, 633.
normal alveolar pressure of, in man (FITZGERALD and HALDANE), A., ii, 539.
production of, in muscular work (KORAEN), A., ii, 329.
excretion of, during exercise (HIGLEY and BOWEN), A., ii, 44.
output of, after the administration of various sugars (JOHANSSON, BILLSTRÖM, and HEIJL), A., ii, 329.
variations in the amount of, in the air of Kew during the years 1898–1901 (BROWN and ESCOMBE), A., ii, 815.
influence of, on vegetation (DEMOUSSY), A., ii, 111.
assimilation of, by leaves (BLACKMAN and MATTHAEI), A., ii, 750.
influence of temperature on the assimilation of, by green leaves (KANITZ), A., ii, 848.
different origin of, given off by plants during respiration (PALLADIN), A., ii, 751.
decomposition of, by plants (BERNARD), A., ii, 275.
origin, amount, and importance of, in soils (STOKLASA and ERNEST), A., ii, 607.
estimation of, in air (MACKIE), A., ii, 355.

Carbon *di*oxide (*carbonic anhydride*), estimation of, in the atmosphere, by the rate of its absorption by a free surface of a solution of an alkali hydroxide (BROWN and ESCOMBE), A., ii, 858.
apparatus for estimating, in carbonates (KREIDER), A., ii, 280.
indirect estimation of, in salts (LUTZ and TSCHISCHIKOFF), A., ii, 203.
oxychloride and oxysulphide. See Carbonyl chloride and sulphide.
silicide of the Cañon Diablo meteorite (MOISSAN), A., ii, 43, 247.
*di*sulphide, heats of combustion and formation of (THOMSEN), A., ii, 574.
slow combustion of (SMITH), P., 311.
Carbon, hydrogen, and nitrogen, estimation of, in cyanides (MULLER), A., ii, 767.
estimation of, in ferrosilicon (JENE), A., ii, 355.
apparatus for the estimation of, in iron by Eggertz's method (SCHUMACHER), A., ii, 203.
and hydrogen, estimation of, in organic compounds (PREGL), A., ii, 420.
organic, estimation of, in soils (PETTIT and SCHAUB), A., ii, 202.
Carbon atom, asymmetric, further analogy between the asymmetric nitrogen atom and (JONES), T., 135; P., 10.
Carbon compounds. See Organic compounds.
Carbonium salts (v. BAEYER), A., i, 281; (HANTZSCH), A., i, 606; (KEHRMANN and DE GOTTRAU), A., i, 670.
Carbonyl chloride, action of ammonia on (STUER), A., i, 579; (HANTZSCH and STUER), A., ii, 312.
compounds of, with aluminium chloride (BAUD), A., ii, 525.
sulphide, heats of combustion and formation of (THOMSEN), A., ii, 574.
Carbonylferrocyanides, source of the excessive moisture found in the combustion of certain (MULLER), A., i, 756.
Carbonyl group as tannophore in tannins (NIERENSTEIN), A., i, 805.
Carbostyril, 6:8-*di*bromo-, and methyl and ethyl ethers of the 8-nitro-compound (DECKER, GADOMSKA, SANDBERG, and STAVROLOPOULOS), A., i, 374.
Carbo-*o*- and -*p*-**toluidido-***p*-**hydroxyazo-** and **-hydrazo-benzenes** (GOLDSCHMIDT and LÖW-BEER), A., i, 390.
4-*o*-**Carboxybenzyl-3-methyl-5-***iso***oxazolone** and **-pyrazolone** and 1-carboxylamide of the pyrazolone (BÜLOW and SIEBERT), A., i, 530.
Carboxycamphoracetic acid, methyl ester (HALLER), A., i, 601.
Carboxy-β-camphorpropionic acid, methyl ester (HALLER), A., i, 602.
α-Carboxydihydrocinnamanilide (DIECKMANN, HOPPE, and STEIN), A., i, 136.
3-Carboxy-4:6-dimethoxyphenylglyoxylic acid (EIJKMAN, BERGEMA, and HENRARD), A., i, 359.
Carboxydiphenylthiocarbamide (DORAN and DIXON), T., 343; P., 77.
Carboxyguaiacolphenylthiocarbamide (DORAN and DIXON), T., 343; P., 79.
Carboxyhæmochromogen (PREGL), A., i, 622.
Carboxyl group, molecular transpositions and migration of the, in the dehydration of certain hydroxy-acids (BLAISE and COURTOT), A., i, 853.
introduction of the, into phenol, by the action of carbon dioxide (TIJMSTRA), A., i, 439.
Carboxylic acids. See under Acids.
Carboxyphenyl-*iso***amyl-** and **-methylthiocarbamides** (DORAN and DIXON), T., 342; P., 77.
Carcinoma ventriculi, composition of the blood in (ERBEN), A., ii, 741.
Cardiac rhythm and ions (BENEDICT), A., ii, 330.
restorers of the (LINGLE), A., ii, 835.
Carnitine and its salts from muscle (v. GULEWITSCH and KRIMBERG), A., i, 726.
Carnotite, absence of helium from (ADAMS), A., ii, 329.
Carpic acid, bromo-, formula of (PINNER), A., i, 465.
Carvacrol, formation of, from carvone and eucarvone, and the velocity of the transformation (DORMAAR), A., i, 222.
latent heat of vaporisation of (LUGININ), A., ii, 801.
Carvacryl-2-methylpiperidide and its platinichloride (HILDEBRANDT), A., i, 155.
Carvone, transformation of, into α-phellandrene (HARRIES and JOHNSON), A., i, 535.
reactions of (RUPE and SCHLOCHOFF), A., i, 449.

Caryophyllic acid and its methyl ester and acetyl derivative (MEYER and HÖNIGSCHMID), A., i, 456.
Caryophyllin and its methyl ether and their acetyl derivatives (MEYER and HÖNIGSCHMID), A., i, 456.
and its diacetyl and benzoyl derivatives, salts, and diphenylcarbamate (HERZOG), A., i, 804.
Cascara bark, chemical examination of (JOWETT), A., ii, 193.
Cascara sagrada, estimation of the active principles of (WARIN), A., ii, 659.
Casein, variations in the amount of, in human milk (PATEIN and DAVAL), A., ii, 738.
and paracasein in some of their relations to bases and acids (VAN SLYKE and HART), A., i, 498.
hydrolysis of (SKRAUP), A., i, 619.
oxidation of, with calcium permanganate (OTORI), A., i, 104; (v. FÜRTH), A., i, 497.
action of the rennet ferment on (LAQUEUR), A., ii, 848.
hydrolysed, feeding experiments with (ABDERHALDEN), A., ii, 334; (ABDERHALDEN and RONA), A., ii, 467.
specific rotation of salts of (LONG), A., i, 498.
Caseinokyrine and its salts and reactions (SIEGFRIED), A., i, 104.
Castanin from the Spanish chestnut (BARLOW), A., i, 398.
Castilloa elastica, milk of (DE JONG), A., ii, 52.
See also Caoutchouc.
Castor oil, optical properties of (LYTHGOE), A., ii, 619.
seeds. See Ricinus seeds.
Catalase (SHAFFER), A., i, 956.
hydrolysis of hydrogen peroxide by (BACH), A., i, 623.
of blood (JOLLES and OPPENHEIM), A., ii, 265.
Boletus, decomposition of hydrogen peroxide by (v. EULER), A., ii, 343.
of milk (REISS), A., ii, 337.
of yeast. See Yeast catalase.
estimation of, in blood (JOLLES), A., ii, 215.
Catalases (v. EULER), A., i, 400.
Catalysis. See under Affinity.
Catechin and its penta-acetyl derivative from gambier catechu (PERKIN), T., 398; P., 89.
Catechol (*pyrocatechol*, 1:2-di*hydroxybenzene*), freezing points of mixtures of, with *p*-toluidine, *α*-naphthylamine, and picric acid (PHILIP and SMITH), T., 1738; P., 255.
Catechol (*pyrocatechol*, 1:2-di*hydroxybenzene*), action of hippuryl chloride on (FISCHER), A., i, 892.
condensation of, with ketones (FABINYI and SZEKI), A., i, 591.
ether, *hexa*bromo*di*hydroxy- (JACKSON and RUSSE), A., i, 217.
diethyl ether, *di*- and 3:4:5-*tri*-nitro- (BLANKSMA), A., i, 431.
dimethyl ether. See Veratrole.
Catellagic acid (A. G. and F. M. PERKIN), P., 212.
and its diacetyl derivative (PERKIN and NIERENSTEIN), T., 1417; P., 186.
Cathode. See under Electrochemistry.
Cats and dogs, absorption and excretion of iron in (SATTLER), A., ii, 333.
Celery, chemistry of (BAMBERGER and LANDSIEDL), A., ii, 52.
Cell chemistry, contribution to (VAUGHAN), A., ii, 189.
Cells, receptivity of, in normal and immunised animals (JACOBY), A., ii, 47.
animal and vegetable, distribution o potassium in (MACALLUM), A., ii, 270.
galvanic. See under Electrochemistry.
living, reactions of, to very dilute solutions of various substances (BOKORNY), A., ii, 476, 752.
Cellulose (RIESENFELD and TAURKE), A., i, 746.
constitution of (GREEN), A., i, 22; (CROSS and BEVAN), A., i, 119.
formation of sulphuric esters in the nitration of, and their influence on stability (HAKE and LEWIS), A., i, 512.
acetyl derivatives of (CROSS, BEVAN, and TRAQUAIR), A., i, 511.
acetosulphates (CROSS, BEVAN, and BRIGGS), A., i, 512, 862.
Cellulose, nitro-, determination of the decomposition-velocity of (OBERMÜLLER), A., ii, 291.
Cement, Portland, hydration of gypsum and, in relation to the solubility of calcium sulphate (ROHLAND), A., ii, 319.
Cements, hydration and hardening of (ROHLAND), A., ii, 19, 389, 511; (JORDIS), A., ii, 155, 709.
technical analysis of (PECKHAM), A., ii, 204.
Centrifuge (BEEBE and BUXTON), A., ii, 514.
Cerebron and its hydrolysis and **Cerebroic acid** and its sodium salt and their acetyl derivatives (THIERFELDER), A., i, 105, 621.

Ceric ammonium nitrate, electrolytic preparation of (PLANCHER and BARBIERI), A., ii, 250.
Cerium metals, action of organic acids on the (BEHRENS), A., i, 167.
Cerium salts (WOLFF), A., ii, 457.
Cerium organic compounds (WOLFF), A., ii, 457.
Charles' law, apparatus for the demonstration of (FRANKFORTER and FRARY), A., ii, 514.
Chaulmoogra oil, source of (POWER and BARROWCLIFF), T., 896; P., 176.
isolation of hydnocarpic acid from (POWER and BARROWCLIFF), T., 895; P., 176.
Chaulmoogric acid, homologue of (POWER and BARROWCLIFF), T., 884; P., 175.
Cheese, volatile fatty acids in (JENSEN), A., ii, 114.
Emmenthaler, formation of tyrothrixin in (ADAMETZ and CHSZASZEZ), A., ii, 273.
Cheese enzyme. See Enzyme.
Cheese-ripening, action of different lactic ferments on (v. FREUDENREICH and THÖNI), A., ii, 189.
Chelidonic acid, ethyl ester, molecular refraction of (HOMFRAY), T., 1455; P., 226.
*di*bromo-, ethyl ester (FEIST and BAUM), A., i, 915.
Chemical changes. See under Affinity.
character, relation between the power of absorption of radiant energy and (BYK), A., ii, 566.
combination of toxic action as exemplified in hæmolytic sera (MUIR and BROWNING), A., ii, 107.
constitution in relation to optical properties (ARMSTRONG and ROBERTSON), T., 1272; P., 180.
and absorption spectra of the thiazines and thiazones (FORMÁNEK), A., ii, 217.
and colour and dyeing power with mordants of the hydroxyanthraquinones and their sulphonic acids, connection between (v. GEORGIEVICS), A., i, 447.
and physiological action (SCHMIDT), A., i, 23; ii, 105.
dynamics and equilibrium. See under Affinity.
similarity of elements and radicles, the condition which determines the (MARTIN), A., ii, 693.
structure in relation to colour and absorption spectra (HARTLEY), T., 1796, 1822; P., 166, 167.
Chemiluminescence (TRAUTZ), A., ii, 662.
Chemotaxis of Isoetes spermatozoids (SHIBATA), A., ii, 190.
Cherry-laurel. See *Prunus Laurocerasus*.
Chestnut, Spanish, globulin from the (BARLOW), A., i, 397.
Chiclalbans, Chiclabanan, Chiclafluavil, Chiclagutta (TSCHIRCH and SCHERESCHEWSKI), A., i, 685.
Chiodectonic acid and **Chiodectin** (HESSE), A., i, 140.
Chloral, action of ammonia and of amines on (KUHARA and KISHI), A., i, 861.
condensation of, with aromatic hydrocarbons under the influence of aluminium chloride (DINESMANN), A., i, 645.
mono-hydrobromide and -hydrochloride (VORLÄNDER and SIEBERT), A., i, 792.
ethyl alcoholate, action of amyl alcohol on (GADAMER), A., i, 326.
hydrate, action of bases on (ENKLAAR), A., i, 170, 741.
propyl alcoholate (VITORIA), A., i, 110.
Chloralamino-compounds (GÄRTNER), A., i, 130.
Chloranil. See *p*-Benzoquinone, *tetra*-chloro-.
Chloric acid, Chlorates, and Chlorides. See under Chlorine.
Chlorination, studies in (COHEN and BENNETT), T., 320; P., 80; (COHEN, DAWSON, and CROSLAND), T., 1034; P., 211; (COHEN and HARTLEY), T., 1360; P., 223.
Chlorine, atomic weight of (RICHARDS and WELLS), A., ii, 450; (DIXON and EDGAR), A., ii, 696.
atomic weight of, deduced from its density (GUYE), A., ii, 442.
apparatus for the production of (ECKART), A., ii, 515.
evolution of, from potassium chlorate and hydrochloric acid (SAND), A., ii, 156.
acceleration of the evolution from potassium chlorate and hydrochloric acid by platinum (SIRK), A., ii, 381; (FOERSTER and MÜLLER), A., ii, 697.
function of the catalyst in the Deacon process for the manufacture of (LEVI and BETTONI), A., ii, 515.
laboratory model of the Castner mercury process of obtaining (LE BLANC and CANTONI), A., ii, 696.
condition in which, exists in colloidal solutions of metallic hydroxides (RUER), A., ii, 169.

Chlorine, action of the silent electric discharge on (Russ), A., ii, 381; (Foster), A., ii, 449.
cause of the period of induction in the union of hydrogen and (Chapman and Burgess), A., ii, 236, 697.
action of radium rays on mixtures of hydrogen and (Jorissen and Ringer), A., ii, 219.
determination of the density of, at high temperatures (Reinganum), A., ii, 810.
Hydrochloric acid (*hydrogen chloride*), anodic P.D.-current for, at platinum electrodes (Luther and Brislee), A., ii, 135.
methods employed in preparing the tables of specific gravity of (Ferguson), A., ii, 632.
table for the preparation of normal solutions of, according to the density (Küster and Münch), A., ii, 198.
equilibrium between ozone and (Jahn), A., ii, 16.
action of, on potassium chlorate (Kolb and Davidson), A., ii, 59; (Ditz), A., ii, 760.
interaction of, with potassium permanganate in presence of ferric chloride (Brown), A., ii, 166.
formation of, in the stomach (Benrath and Sachs), A., ii, 731.
in the gastric juice in cancer (Moore), A., ii, 741.
Chlorides, Neumann's method of estimating (Legge), A., ii, 416.
estimation of, by means of silver chromate (Andrews), A., ii, 115.
bromides, and iodides, new method for the estimation of mixtures of (Wentzki), A., ii, 478.
cyanides, and thiocyanates, titrimetric estimation and separation of (Rupp), A., ii, 867.
Chloric acid, formation and decomposition of (Sand), A., ii, 156; (Sirk), A., ii, 381.
Chlorates, electrolytic formation of (Foerster and Müller), A., ii, 697.
diphenylamine as a reagent for, and its use when mixed with resorcinol and β-naphthol (Alvarez), A., ii, 352.
estimation of (Kolb and Davidson), A., ii, 59; (Scholtz), A., ii, 651; (Ditz), A., ii, 760.
and perchlorates, estimation of, in saltpetre (Tschernobéeff), A., ii, 416.

Chlorine:—
Perchlorates, reduction of, by the wet method (Sjollema), A., ii, 21.
estimation of (Dittrich and Bollenbach), A., ii, 281.
Hypochlorous acid (Sand), A., ii, 156; (Sirk), A., ii, 381.
Chlorine, estimation of, in chlorates (Jannasch and Jahn), A., ii, 416.
and bromine, estimation of small proportions of, in iodine (Tatlock and Thomson), A., ii, 281.
estimation of, in urine (Dehn), A., ii, 350.
Chloroform, absorption of, in later stages of anæsthesia (Collingwood), A., ii, 408.
effect of, on renal activity (Thompson), A., ii, 273.
action of, on the blood-vessels of bowel and kidney (Embley and Martin), A., ii, 264.
action of, on the heart and arteries (Schäfer and Scharlieb), A., ii, 105.
selective action of, on the liver (Doyon and Billet), A., ii, 471.
action of, on proteids (Edie), A., i, 397.
action of, on dry seeds (Becquerel), A., ii, 474.
estimation of inspired and expired (Waller and Collingwood), A., ii, 424.
Chloroform vapour, estimation of, by a tonometric method (Collingwood), A., ii, 121.
estimation of, in air (Levy), A., ii, 121.
Chloronium salts (Stieglitz and Barnard), A., i, 699.
Chlorophyll (Marchlewski), A., i, 540.
Chlorophyllic assimilation in absence of oxygen (Friedel), A., ii, 191.
Cholehæmatin, phylloerythrin, and bilipurpurin, identity of (Marchlewski), A., i, 500, 847.
Cholera toxin, preparation of (Brau and Denier), A., ii, 747.
Cholestanonic acid, hydroxy-, lactone of (Windaus), A., i, 128.
Cholesterol (Windaus), A., i, 128.
action of light on (Schulze and Winterstein), A., i, 128.
and saponin, antagonistic action of (Hausmann), A., ii, 744.
esters in the brain (Bünz), A., ii, 841.
new test for (Neuberg and Rauchwerger), A., ii, 122.

Choline, production of, from lecithin and brain tissue (CORIAT), A., ii, 47.
neurine, and muscarine, derivatives of, change of constitution of, in relation to their physiological action (SCHMIDT), A., i, 23; ii, 105.
Chromammonium compounds. See under Chromium.
Chroman, synthesis of (v. BRAUN and STEINDORFF), A., i, 294.
Chrome alum, absorption spectra of solutions of (FERRERO and NOZARI), A., ii, 493.
Chromeoxalates, constitution of (CAMERON), A., ii, 529.
Chromic acid and **salts**. See under Chromium.
Chromium, presence of, in coal from Liège (JORISSEN), A., ii, 535.
stereochemistry of (PFEIFFER, KOCH, LANDO, and TRIESCHMANN), A., i, 33.
enhanced lines of, in the Fraunhoferic spectrum (LOCKYER and BAXANDALL), A., ii, 69.
ultra-violet spark spectrum of (ADENEY), A., ii, 493.
optical reflection constants and the electromotive condition of (BERNOULLI), A., ii, 1.
electrolytic (CARVETH and MOTT), A., ii, 394; (CARVETH and CURRY), A., ii, 460.
higher oxidation products of (RIESENFELD, WOHLERS, and KUTSCH), A., ii, 461; (HOFMANN and HIENDLMAIER), A., ii, 716; (RIESENFELD, KUTSCH, OHL, and WOHLERS), A., ii, 824.
Chromammonium salts (PFEIFFER and BASCI), A., i, 854.
physiological action of (BOCK), A., ii, 49.
Chromium salts, variations of basicity in (COLSON), A., ii, 639.
Chromium nitride (BAUR and VOERMAN), A., ii, 715.
aluminium silicides (MANCHOT and KIESER), A., ii, 165.
sulphate in which the acid is in two states of combination (COLSON), A., ii, 592.
*penta*sulphate (COLSON), A., ii, 99, 639.
Chromic chlorides, isomeric, solubilities of the (ROOZEBOOM and OLIE), A., ii, 716.
Chromic acid, decomposition of, by means of hydrogen peroxide (RIESENFELD, KUTSCH, and OHL), A., ii, 825.
estimation of (SEGALLE and LANGER), A., ii, 707.
Chromium:—
Perchromic acid and its salts (BYERS and REID), A., ii, 37; (RIESENFELD, WOHLERS, and KUTSCH), A., ii, 461; (HOFMANN and HIENDLMAIER), A., ii, 716; (RIESENFELD, KUTSCH, OHL, and WOHLERS), A., ii, 824.
Chromic phosphate, crystalline (SCHIFF), A., ii, 255.
potassium selenide (MILBAUER), A., ii, 95.
sulphate, green, variable velocity reaction of (COLSON), A., ii, 460.
normal green, existence of (COLSON), A., ii, 94, 255.
Chromous salts, electrolytic potential of (MAZZUCCHELLI), A., ii, 570.
Chromium organic compounds (PFEIFFER, KOCH, LANDO, and TRIESCHMANN), A., i, 34; (PFEIFFER and BASCI), A., i, 855.
Chromous sodium thiocyanate (KOPPEL), A., i, 638.
Chromium, estimation of, in steel (IBBOTSON and HOWDEN), A., ii, 119, 120.
Chromophore groups (RUPE and SCHWARZ), A., i, 83.
Chromotropic acid, chloro-, aminoazo-dyes from (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 953.
Chromous salts. See under Chromium.
Chrysanthemums (HÉBERT and TRUFFAUT), A., ii, 475.
Chrysazin diphenyl ether (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 798.
Chrysene, derivatives of (GRAEBE), A., i, 82.
β-Chrysenic acid and its silver salt and methyl ester (GRAEBE), A., i, 82.
Chrysoberyl from Canada (EVANS), A., ii, 328.
Chrysocolla from Arizona (LINDGREN and HILLEBRAND), A., ii, 96.
from Western Australia (SIMPSON), A., ii, 176.
Chrysodiphen-2′-amic acid and its isomeride and methyl ester (GRAEBE), A., i, 82.
Chrysodiphenic acid (*2′-phenylnaphthalene-1:2′-dicarboxylic acid*) and its salts and esters (GRAEBE and GNEHM), A., i, 60.
Chrysofluorene and its picrate (GRAEBE), A., i, 83.
Chrysofluorenone (GRAEBE), A., i, 82.
Chrysoketonecarboxylic acid (GRAEBE and GNEHM), A., i, 61.

Chrysophanic acid from the rhizomes of Rheums cultivated in Berne (TSCHIRCH and EIJKEN), A., ii, 605.
and its methyl ethers and acetyl derivatives (OESTERLE), A., i, 911.
Chrysotoxin, physiological action of (DALE), A., ii, 545.
Chymosin. See Rennin.
Cicutine and nicotine, reactions for distinguishing between (TORRESE), A., ii, 778.
Cilia, reversal of the effective stroke of (PARKER), A., ii, 542.
action of monoatomic alcohols on (GRÜTZNER and BREYER), A., ii, 105.
effect of salt solutions on (MAXWELL), A., ii, 269.
Ciliary activity, an instrument for recording (DIXON and INCHLEY), A., ii, 542.
Ciliary movement, reversal of, in Metazoa (PARKER), A., ii, 183.
Cinchona alkaloids. See Alkaloids.
barks, microchemical analysis of (VAN LEERSUM), A., ii, 620.
estimation of quinine in (VIGNERON), A., ii, 363.
β-*iso*Cinchonicine, constitution of, and its additive salts (KAAS), A., i, 151.
Cinchonicines, **β-*iso*-** and **α-*iso*-ψ-**, constitution of (KAAS), A., i, 296.
Cinchonidine dibromides and their additive salts (CHRISTENSEN), A., i, 226.
Cinchonine, equilibrium between, and organic acids in various solvents (SILL), A., ii, 377.
*di*bromides and their additive salts (CHRISTENSEN), A., i, 227.
reactions of (REICHARD), A., ii, 561, 659.
Cinchotoxine, *iso*nitroso-, action of methyl iodide on (ROHDE and SCHWAB), A., i, 228.
Cinene and its hydrobromide (RUPE and SCHLOCHOFF), A., i, 414.
Cinenic acid, synthesis and constitution of, and its amide and nitrile (RUPE and SCHLOCHOFF), A., i, 409.
Cinnabar, electrolytic estimation of mercury in (SMITH), A., ii, 860.
Cinnamaldehyde, condensations of (HINRICHSEN and LOHSE), A., i, 132.
conversion of, into cinnamyl alcohol (BARBIER and LESER), A., i, 653.
compound of, with mercuric chloride (ERDMANN), A., i, 18.
Cinnamaldehyde, *o*-amino-, *N*-benzoyl derivative of, and its oxime and phenylhydrazone (REISSERT), A., i, 926.
Cinnamene. See Styrene.
Cinnamenylacridine, *m*-nitro-, and its additive salts (FRIEDLÄNDER), A., i, 829.
Cinnamenylacrylic acid, α-cyano-, and its ethyl ester, dibromides of (HINRICHSEN and LOHSE), A., i, 132.
Cinnamenyl-α-cyanoacrylic acid, bromo-, ethyl ester (PICCININI), A., i, 599.
Cinnamenyldibenzyl ketone, α-chloro- (HERTZKA), A., i, 292.
Cinnamenyl *m*-tolyl ketone (MAYER), A., i, 357.
Cinnamic acid, influence of various sodium salts on the solubility of (PHILIP), T., 987; P., 200.
separation of, into stereoisomeric components (ERLENMEYER), A., i, 892.
Cinnamic acid, esters, action of magnesium organic compounds on (KOHLER and HERITAGE), A., i, 207.
Cinnamic acid, *o*-amino-, *N*-benzoyl derivative of (REISSERT), A., i, 926.
α-bromo-, ethyl ester, action of magnesium organic compounds on (KOHLER and JOHNSTIN), A., i, 215.
α-cyano-, reactions of, with organic magnesium compounds (KOHLER and REIMER), A., i, 347.
isomeric nitro-, electrolytic reduction of (MARIE), A., i, 554.
Cinnamic acid synthesis, Claisen's, by means of sodium (STOERMER and KIPPE), A., i, 526, 777; (MICHAEL), A., i, 646.
***allo*Cinnamic acid**, second stereoisomeric component of (ERLENMEYER), A., i, 892.
conversion of, into Erlenmeyer's isocinnamic acid (ERLENMEYER), A., i, 285.
***iso*Cinnamic acid**, Liebermann's, formation of, by the resolution of allocinnamic acid with brucine (ERLENMEYER), A., i, 646.
Cinnamic acids, α-chloro- (SUDBOROUGH and JAMES), P., 86.
Cinnamide, β-amino- (GUARESCHI), A., i, 823.
Cinnamyl alcohol from cinnamaldehyde (BARBIER and LESER), A., i, 653.
Cinnamylamine, preparation of (SCHMIDT and FLAECHER), A., i, 371.
Cinnamylformic acids, stereoisomeric, and their phenylhydrazones (ERLENMEYER), A., i, 784.
Cinnamylideneacetophenone, action of organic magnesium compounds on (KOHLER), A., i, 358.
union of, with mercaptans (RUHEMANN), T., 23.
dipicrate (VORLÄNDER and SIEBERT), A., i, 793.

Cinnamylidene-acetylacetone and **-bismalonic acid**, ethyl ester (KNOEVENAGEL and HERZ), A., i, 63.
Cinnamylideneaniline, *o*-amino-, *N*-benzoyl derivative of (REISSERT), A., i, 926.
Cinnamylidenebenzylideneacetone, union of, with mercaptans (RUHEMANN), T., 466; P., 123.
Cinnamylidenecamphor and its reduction products (RUPE and FRISELL), A., i, 220, 362; (BRÜHL), A., i, 293.
Cinnamylidenehippuric acid and its ethyl ester (ERLENMEYER and MATTER), A., i, 238.
Cinnamylidenelævulic acid and its reduction products and esters and salts, and oximinoximic acid (RUPE and SPEISER), A., i, 351.
Cinnamylidenemalononitrile and its dibromide (HINRICHSEN and LOHSE), A., i, 132.
Cinnamylidenetetrazoline (RUHEMANN and MERRIMAN), T., 1776.
Cinnamyltrimethylamine salts (SCHMIDT and FLAECHER), A., i, 370.
Citramonamic acid and its silver salt (SCHROETER and SCHWAMBORN), A., i, 739.
Citrate of magnesia, effervescing. See Tartaric acid, sodium salt.
Citric acid, detection of, in presence of malic acid (BROEKSMIT), A., ii, 868.
detection of, in wines (ROBIN), A., ii, 124.
Citric acid, *s*-dialkyl esters, and their nitriles and amides (SCHROETER, SCHMITZ, and SCHWAMBORN), A., i, 738.
Citroanilic acid, anilide of (BERTRAM), A., i, 466.
Citrodianilidic acid and its potassium and aniline salts (BERTRAM), A., i, 466.
Citrus Aurantium. See Orange, sweet.
Citrus Limonum. See Lemon tree.
Citrylideneacetic acin, α-cyano- (HINRICHSEN and LOHSE), A., i, 132.
Citrylideneacetoacetic acid, ethyl ester (KNOEVENAGEL), A., i, 170.
Cladestin (HESSE), A., i, 138.
Clay, absorption of water by (VAN BEMMELEN), A., ii, 90.
Clays, plasticity of (GROUT), A., ii, 713.
plastic, as semipermeable walls (ROHLAND), A., ii, 683.
Coal from Liège, presence of chromium and vanadium in (JORISSEN), A., ii, 535.
Coal, Parr's method for estimating the heat of combustion of (LUNGE and GROSSMANN), A., ii, 628.
testing (PFEIFFER), A., ii, 767.
estimation of "coke" and "volatile matter" in (ARTH), A., ii, 202.
estimation of sulphur in (BENDER), A., ii, 281; (BRUNCK), A., ii, 762.
See also Fuels.
Coal gas, purification of, from hydrogen sulphide (GEDEL), A., ii, 714.
explosion of mixtures of, with air in a closed vessel (BAIRSTOW and ALEXANDER), A., ii, 815.
Coal tar dyes, behaviour of, towards starch, silicic acid, and silicates (SUIDA), A., i, 75.
Cobalt, physical properties of pure (COPAUX), A., ii, 254.
influence of concentration on the magnetic properties of solutions of (VAILLANT), A., ii, 503.
green compounds of, produced by oxidising agents (DURRANT), T., 1781; P., 251.
Cobaltammonium compounds (WERNER and GRÜN), A., ii, 93; (WERNER and BERL), A., ii, 323.
physiological action of (BOCK), A., ii, 49.
salts, bromo-derivatives of (WERNER and WOLBERG), A., ii, 322, 528.
Cobalt alloys with iron (GUERTLER and TAMMANN), A., ii, 528.
with nickel (GUERTLER and TAMMANN), A., ii, 92.
Cobalt salts, behaviour of calcium carbonate towards (MEIGEN), A., ii, 455.
Cobalt chloride (OECHSNER DE CONINCK), A., ii, 393.
chloride tetrahydrate and hexahydrate (OECHSNER DE CONINCK), A., ii, 254.
*di*fluoride (*cobaltous fluoride*) and its compounds with ammonia and chlorine (BÖHM), A., ii, 249.
*tri*fluoride (*cobaltic fluoride*), CoF_3 (BARBIERI and CALZOLARI), A., ii, 393.
Cobalt organic salts, constitution of, as they exist in solution (TOWER), A., i, 410.
ethylenediamine compounds (GERB), A., i, 328.
Dicobaltammine organic compounds (WERNER and FEENSTRA), A., ii, 323.
Cobalt, new reaction of (POZZI-ESCOT), A., ii, 423.
electrolytic analysis of (PERKIN and PREBBLE), A., ii, 207.

Cobalt and nickel, separation of iron from, by means of formic acid (BORGSTRÖM), A., ii, 538.
Cobalt steels, constitution and properties of (GUILLET), A., ii, 527; (GUERTLER and TAMMANN), A., ii, 528.
Cobaltous solutions, alkaline (TUBANDT), A., ii, 591.
Coca leaves, estimation of alkaloids in (DE JONG), A., ii, 778.
Cocaine, selective action of, on nerve fibres (DIXON), A., ii, 106.
reactions of (REICHARD), A., ii, 127.
Cocoanut oil, specific gravity of (RAKUSIN), A., ii, 304.
saponification of, by cytoplasm (URBAIN, SAUGON, and FEIGE), A., i, 108.
test for the purity of (MILLIAU), A., ii, 775.
detection of, in lard (HOTON), A., ii, 870.
estimation of, in margarine (KIRSCHNER), A., ii, 213.
Codeine, constitution of (KNORR and PSCHORR), A., i, 922.
amino-, diacetyl derivative, and nitro-, and their methiodides (VONGERICHTEN and WEILINGER), A., i, 542.
Cod liver oil, optical properties of (LYTHGOE), A., ii, 619.
iodine numbers of fresh and old samples of (PAJETTA), A., ii, 775.
Cœlestine-blue and its derivatives (GNEHM and BAUER), A., i, 832.
Coffee beans without caffeine (BERTRAND), A., ii, 648.
β-Collidine. See 4-Methyl-3-ethylpyridine.
Colloidal granules, composition of (HENRI and MAYER), A., ii, 14.
Colloidal metals, electric preparation of (SVEDBERG), A., ii, 817.
rôle of diffusion during catalysis by (SAND), A., ii, 233; (SENTER), A., ii, 379.
See also Bismuth, Copper, Gold, Iridium, Iron, Osmium, Palladium, Platinum, Rhodium, Ruthenium, and Silver.
Colloidal metalloids. See Selenium and Tellurium.
Colloidal solutions (BENEDICKS), A., ii, 689.
and contact electrification (PERRIN), A., ii, 138.
electrolytic conductivity of (MALFITANO), A., ii, 72; (DUCLAUX), A., ii, 432, 511.
osmotic pressure of (DUCLAUX), A., ii, 511.
behaviour of enzymes towards (REISS), A., i, 956.
Colloidal state (MALFITANO), A., ii, 14.
Colloidal substances of soils, isolation of the (SJOLLEMA), A., ii, 195.
Colloids, theory of (JORDIS), A., ii, 153, 447; (BILLITZER), A., ii, 305; (LANDSTEINER), A., ii, 447; (BECHHOLD), A., ii, 511.
contribution to the study of (WINTER), A., ii, 245.
physical alterations of (PAULI), A., i, 496.
absorption of ferments by (DAUWE), A., i, 623.
action of, on proteid solutions (BILTZ MUCH, and SIEBERT), A., i, 495.
inorganic (GUTBIER and HOFMEIER), A., ii, 327.
absorption compounds of, with organic colloids (LOTTERMOSER), A., ii, 318.
precipitation of, by electrolytes (MATHEWS), A., i, 845.
of opposite electrical sign, influence of electrolytes on the mutual precipitation of (DES BANCELS), A., ii, 513.
Colorimeter (SCHREINER), A., ii, 760.
Colorimetry (EIJDMAN), A., ii, 688.
Colour, studies on the origin of (SMEDLEY) T., 1249; P., 221.
contribution to the theory of the origin of (ARMSTRONG and ROBERTSON), T., 1272; P., 180.
in relation to chemical structure and absorption spectra (HARTLEY), T., 1796, 1822; P., 166, 167.
and hydration (DONNAN), A., ii, 806.
Colour changes, experiments on (LEWIS), A., ii, 509; (JONES and BASSETT), A., ii, 510.
Colouring matters, synthesis of (LEMOULT), A., i, 194.
theory of (SCHMIDLIN), A., i, 75; ii, 11, 12.
organic, ultra-violet absorption spectra of (KRÜSS), A., ii, 293.
action of low temperatures on (SCHMIDLIN), A., ii, 12.
affinity of, for conjunctive tissue (CURTIS and LEMOULT), A., ii, 600.
of aniline and its homologues, oxidation of, on the fibre (KIRPITSCHNIKOFF), A., i, 540.
from the substances formed by the action of formaldehyde and sodium hydrogen sulphite on aromatic diamines (PRUD'HOMME), A., i, 548.
from 2-methylquinolinium alkyl sulphates (FARBENFABRIKEN VORM. F. BAYER & CO.), A., i, 548.
azo-. See Azo-colouring matters.
ceramic, tungsten trioxide as a (GRANGER), A., ii, 325.

Colouring matters, coal tar. See Coal tar.
of the cyanine series (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 149.
red, of tomatoes (MONTANARI), A., i, 293.
substantive, quantitative experiments on the formation of inorganic analogues of (BILTZ and UTESCHER), A., ii, 807.
sulphur (FRIEDLÄNDER and MAUTHNER), A., i, 102.
the presence and action of mercaptan groups in direct (VIDAL), A., i, 306.
state of affinity of some (BILTZ and BEHRE), A., ii, 808.
from 2:2′-diamino-4:4′-oxalotoluidide (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 540.
brown sulphur from 2:4:5-triaminotoluene (KALLE & Co.), A., i, 540.
red sulphur from resorcinol (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 913.
yellow sulphur, from 2:4-diaminophenyl thiocyanate (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 913.
from nitro-2-methylbenziminazole (CHEMISCHE FABRIKEN VORM. WEILER-TER-MEER), A., i, 552.
See also Tannins.
Colouring matters, natural vegetable. See :—
Acacatechin.
Alizarin.
Apigenin.
Berberine.
Brazilin.
Catechin.
Curcumin.
Cyanomaclurin.
Ellagic acid.
Fisetin.
Hæmatoxylin.
Kaempferol.
Quercitrin.
Columbates and **Columbic acid**. See under Columbium.
Columbium (*niobium*) and its salts (SMITH, HALL, PENNINGTON, and BALKE), A., ii, 828; (HALL and SMITH), A., ii, 829.
occurrences of (SCHILLING), A., ii, 537.
oxide, separation of, from titanium oxide (HALL and SMITH), A., ii, 829.
Columbium :—
Columbic acid and tungstic acid, separation of (BEDFORD), A., ii, 832.
Columbates (BEDFORD), A., ii, 831.
Columbium, qualitative reactions for (MELIKOFF and ELTSCHANINOFF), A., ii, 358.
Combustion, mechanics of (ARMSTRONG), A., ii, 448.
method of (DENNSTEDT; WEIL), A., ii, 202.
of organic compounds, electrical method for the (MORSE and TAYLOR), A., ii, 480.
Combustions, apparatus for (PREGL), A., ii, 420.
Comenic acid, constitution of (PERATONER and PALAZZO), A., i, 806.
hydroxy-, constitution of, and its methyl ester (PERATONER and CASTELLANA), A., i, 806.
Complexes, formation of (DONNAN), A., ii, 806.
proof of the formation of, between acids with the help of the laws of isohydric solutions (HOFMANN), A., ii, 235.
Compounds of variable constitution, suggested nomenclature of (HANTZSCH), A., i, 317.
Compressed air and vacuum apparatus, automatic (BEEBE and BUXTON), A., ii, 514.
Compressibility of aqueous solutions of fatty acids (DRUCKER), A., ii, 681.
Condensers with ball mouth-piece (HINDEN), A., ii, 632.
Conduction, mechanism of electrical conductivity and other properties of sodium hydroxide in aqueous solution as elucidating the (BOUSFIELD and LOWRY), A., ii, 135, 298.
Conductivity, electrical. See under Electrochemistry.
molecular, in halogen hydride solutions (STEELE, MCINTOSH, and ARCHIBALD), A., ii, 222.
Congestin, the poison of sea anemones (RICHET), A., ii, 746.
Conglutin from lupin seeds, composition of (ABDERHALDEN and HERRICK), A., i, 846.
Conhydrine and its additive salts (LÖFFLER and KIRSCHNER), A., i, 939.
Conhydrinium iodides, stereoisomeric (SCHOLTZ and PAWLICKI), A., i, 473.
β-Coniceine and its additive salts (LÖFFLER), A., i, 917.
γ-Coniceine (v. BRAUN; v. BRAUN and STEINDORFF), A., i, 812.

Coniine, reactions of (REICHARD), A., ii, 563.
amino- (LÖFFLER and KIRSCHNER), A., i, 940.
4-Coniine and its additive salts (AHRENS), A., i, 232.
Coninium iodides, isomeric (SCHOLTZ), A., i, 296.
Conium alkaloids. See Alkaloids.
Contraction of certain substances on ignition (LUCAS), A., ii, 574.
Control experiments over long periods of time (BERTHELOT), A., ii, 805.
Convolvulus Scammonia, the sugars of (VOTOČEK and VONDRÁČEK), A., i, 74.
Copaifera Mopane, constituents of the fruits of (MAI and RATH), A., ii, 851.
Copal oils (v. SCHMOELLING) A., ii, 775.
Copals, African (COFFIGNIER), A., i, 224.
See also Resins.
Copper, precipitation of, by natural silicates (SULLIVAN), A., ii, 642.
electromotive behaviour of, in its solution in alkali cyanides (SPITZER), A., ii, 501, 611.
equilibrium between tin, oxygen, and (HEYN and BAUER), A., ii, 169.
hydrosol (GUTBIER and HOFMEIER), A., ii, 327.
Copper alloys with aluminium (GUILLET), A., ii, 712.
special constituent obtained in the tempering of (BREUIL), A., ii, 252.
with bismuth (HIORNS), A., ii, 461.
with tin, tensile strength of (SHEPHERD and UPTON), A., ii, 587.
with zinc (SACKUR, MAUZ, and SIEMENS), A., ii, 524.
See also Muntz metal.
with zinc and iron, action of the atmosphere on (HABERMANN), A., ii, 693.
Copper fluoride and its compound with ammonia (BÖHM), A., ii, 249.
iodides (WALKER and DOVER), T., 1584; P., 232.
oxide, colloidal (LEY), A., ii, 524.
sulphide, electrolytic behaviour of (BODLÄNDER and IDASZEWSKI), A., ii, 390.
solubility of, in alkali polysulphides (HASSREIDTER), A., ii, 285, 611.
Cupric chloride, ammonium chloride and water (MEERBURG), A., ii, 17.
hydroxide, preparation of (ANDRLÍK), A., ii, 617.
Cuprous sulphide, fusibility of mixtures of, with antimony sulphide (PÉLABON), A., ii, 435.
Copper alkali and alkaline-earth cyanides (GROSSMANN and VON DER FORST), A., i, 179.
ferrocyanide, analysis of (LEUBA), A., ii, 556.
Copper, analysis of bar- (MURMANN), A., ii, 421.
titration of, by potassium iodide, and applicability of the method in presence of iron and arsenic (MOSER), A., ii, 64, 422.
estimation of, electrolytically (KUFFERATH), A., ii, 64.
estimation of, volumetrically (FERNEKES and KOCH), A., ii, 860.
estimation of oxygen in (DICKSON), A., ii, 479.
estimation of, in dross (VALLETY), A., ii, 483.
Copper-pitch-ore (LINDGREN and HILLEBRAND), A., ii, 97.
from Amzalar, Roumania (NICOLAU), A., ii, 599.
Coronadite from Arizona (LINDGREN and HILLEBRAND), A., ii, 96.
Corpses, chemical nature of the wax of (TARUGI), A., ii, 182.
Corresponding states, validity of the law of, for mixtures of methyl chloride and carbon dioxide (KAMERLINGH ONNES and ZAKRZEWSKI), A., ii, 149.
Corrosive sublimate. See Mercuric chloride under Mercury.
Corydaline, constitution of (HAARS), A., i, 462.
Corydalis alkaloids, physiological action of (GADAMER), A., ii, 411.
Corydalis cava and *C. solida*, alkaloids of (HAARS), A., i, 462.
Corydic acid and its esters and their additive salts (HAARS), A., i, 462.
Corydilic acid and its methyl ester, methiodide and nitrate of (HAARS), A., i, 462.
Cosmoline, composition of commercial (MABERY), A., i, 313.
Cotarnine iodide and its relation to tarconine methiodide and hydrocotarnine (BRUNS), A., i, 370.
Cotellin and its tetrabromo-derivative (HESSE), A., ii, 752.
Coto bark, new (HESSE), A., ii, 752.
Cotton seed oil, fate of, injected subcutaneously (HENDERSON and CROFUTT), A., ii, 735.
and Halphen's reaction (FISCHER and PEYAU), A., ii, 213.
colour reaction of (HALPHEN), A., ii, 125.
detection of, in olive oil (MILLIAU), A., ii, 126.

Coumaric acid, amino-, *N*-benzoyl derivative of (ERLENMEYER and STADLIN), A., i, 239.
Coumarin derivatives from ethyl *o*-carboxy-phthalyl- and -benzyl-acetoacetates (BÜLOW and SIEBERT), A., i, 294.
amino-, *N*-benzoyl derivative of (ERLENMEYER and STADLIN), A., i, 239.
Coumarinketo-acetic acid, ethyl ester, and **-coumaric acid** (KNOEVENAGEL and LANGENSIEPEN), A., i, 64.
Cows, feeding experiments on (KÖHLER, JUST, VOLHARD, POPP, and ZAHN), A., ii, 265; (PASSON), A., ii, 414.
feeding experiments on, with stimulants (FINGERLING), A., ii, 476.
See also Milk.
Coyote, urine of the (SWAIN), A., ii, 186.
Cream of tartar. See Tartaric acid, potassium hydrogen salt.
Creatine in the organism (CZERNECKI), A., ii, 467.
Creatinine and its alkyl derivatives (KORNDÖRFER), A., i, 152.
in the organism (CZERNECKI), A., ii, 467.
origin of (KOCH), A., ii, 182.
elimination of (MENDEL and CLOSSON), A., ii, 186.
Cremated bodies, detection of arsenic in the ashes of (MAI), A., ii, 61.
p-**Cresol**, bromo-derivatives, and the action of nitric acid on, and chlorobromo-derivatives and their acetyl derivatives (ZINCKE, BUFF, and EMMERICH), A., i, 879.
o-bromo- and *o*-chloro- (BADISCHE ANILIN- & SODA-FABRIK), A., i, 149.
3:5-*di*nitro-, reaction of, with potassium cyanide (BORSCHE and BÖCKER), A., i, 51.
Cresols, *o*-, *m*-, and *p*-, dielectric constants of, dissolved in benzene and *m*-xylene (PHILIP and HAYNES), T., 1002; P., 200.
action of, in comparison with phenol (TOLLENS), A., ii, 339.
compounds of, with potassium phenoxide (GENTSCH), A., i, 341.
separation of (GENTSCH), A., i, 341.
Cresyl-. See Tolyl-.
Critical point, state of matter in the neighbourhood of the (BERTRAND and LECARME), A., ii, 627; (RAVEAU), A., ii, 628.
Critical temperature, exact expression for the so-called molecular change of (VAN LAAR), A., ii, 434, 675.
lower, molecular rise of the, of a binary mixture of normal components (VAN LAAR), A., ii, 434, 675.
Crocoite, artificial production of (DE SCHULTEN), A., ii, 175.
Crops, action of sodium chloride on (WOHLTMANN), A., ii, 739.
Crotin in the normal organism, antisubstances against (LUST), A., ii, 48.
Crotonaldehyde, preparation of (SEYEWETZ and BARDIN), A., i, 683.
Crotonic acid (OECHSNER DE CONINCK), A., i, 628.
*iso***Crotonic acid** (OECHSNER DE CONINCK), A., i, 628.
Crotonic acids (AUTENRIETH), A., i, 629.
See also Methylacrylic acid and Vinylacetic acid.
Crucible refrigerator (STEINLEN), A., ii, 349; (MARGOSCHES), A., ii, 421.
Crucibles, improved Gooch (VOLLERS), A., ii, 855.
Cryoscopic measurements with hydrogen cyanide (LESPIEAU), A., ii, 303.
Cryoscopy, studies in comparative (ROBERTSON), T., 1574; P., 231.
Cryptogams, chemical composition of the cell membrane in various (MÜLLER), A., ii, 648.
Crystalline substances, relation of the specific heats of, to temperature (BOGOJAWLENSKY), A., ii, 799.
Crystallisation, velocity of, of supersaturated solutions (LEENHARDT), A., ii, 630.
Crystallographic study of ammonium magnesium and ammonium zinc selenates and sulphates (TUTTON), T., 1123; P., 177.
Crystalloluminescence and triboluminescence (TRAUTZ and SCHORIGIN), A., ii, 494; (TRAUTZ), A., ii, 662.
Crystals, efficiency of centrifugal purification of (RICHARDS), A., ii, 238.
cathode luminescence of (POCHETTINO), A., ii, 430.
do, soften in the neighbourhood of their melting point? (SLATOWRATSKY and TAMMANN), A., ii, 807.
the linear force of growing (BECKER and DAY), A., ii, 807.
liquid (COEHN), A., ii, 14.
mixed (WALLERANT), A., ii, 238.
in systems of three substances (SCHREINEMAKERS), A., ii, 154, 376, 685.
mixed hydrated, decomposition of (HOLLMANN), A., ii, 154.

Crystal-violet and its reactions (LAMBRECHT and WEIL), A., i, 243.
action of magnesium benzyl chloride on (FREUND and BECK), A., i, 159.
Crystal-violet group, salts of (SAND), A., i, 948.
Cudbear, detection of (TOLMAN), A., ii, 215.
Cumene electrolytic oxidation of (LAW and PERKIN), A., i, 761.
ψ-Cumeneazobenzene and its derivatives (WILLGERODT and HERZOG), A., i, 549.
ψ-Cumenesulphon-acetonitrile and **-ethenylaminoxime** (TRÖGER and VOLKMER), A., i, 356.
ψ-Cumenesulphondiethylacetonitrile (TRÖGER and VASTERLING), A., i, 871.
ψ-Cumidine, 2-bromo-5-nitro- (BLANKSMA), A., i, 426.
ψ-Cumidinesulphonic acid, nitro-, and its reactions (BLANKSMA), A., i, 425.
p-**Cuminic acid**, *di*chloro- (AUWERS), A., i, 434.
Cuminil and **Cuminoin**, preparation of (BILTZ and STELLBAUM), A., i, 653.
Cuminildisemicarbazone (BILTZ and STELLBAUM), A., i, 675.
Cuminoinsemicarbazone (BILTZ and STELLBAUM), A., i, 675.
Cumylidenehippuric acid and its esters, amide, and imide (ERLENMEYER and MATTER), A., i, 238.
Cumylsulphon-. See Cumenesulphon-.
Cupric and **Cuprous salts**. See under Copper.
Curcumin, formula of (JACKSON and CLARKE), A., i, 804.
Currents. See Electrochemistry.
Cyamelide (HANTZSCH), A., i, 331.
monomercuric derivative (HANTZSCH, HOFMANN, and LEHMANN), A., i, 332.
Cyanamide, estimation of (PEROTTI), A., ii, 870.
Cyanide mud (HAND), A., i, 696.
Cyanides. See under Cyanogen.
Cyanine series, colouring matters of the (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 149.
Cyano-derivatives, electro-synthesis among (ULPIANI and RODANO), A., i, 260.
Cyanogen bromide, action of, on hydrazine (PELLIZZARI and CANTONI), A., i, 576.
reaction of, with hydroxylamine (WIELAND), A., i, 420.
Cyanogen:—
Hydrocyanic acid (*hydrogen cyanide*) from the leaves of the cherry-laurel and in the bark of the bird-cherry (JOUCK), A., i, 912.
from the seeds of *Gynocardia odorata* (POWER and LEES), T., 352; P., 88; (POWER and BARROWCLIFF), T., 897; P., 177; (GRESHOFF), A., ii, 276.
in red currant leaves (GUIGNARD), A., ii, 752.
from the leaves of *Sambucus nigra* (BOURQUELOT and DANJOU), A., i, 912; ii, 605; (GUIGNARD), A., ii, 604; (GUIGNARD and HOUDAS), A., ii, 648.
from the leaves of *Thalictrum aquilegifolium* (VAN ITALLIE), A., ii, 852.
formation of, by the oxidation of proteids (PLIMMER), A., i, 162.
heats of combustion and formation of (THOMSEN), A., ii, 574.
cryoscopic measurements with (LESPIEAU), A., ii, 303.
behaviour of, towards phenylcarbimide (DIECKMANN and KÄMMERER), A., i, 874.
phenolphthalin as reagent for (WEEHUIZEN), A., ii, 489.
detection of, in presence of ferrocyanides (BENEDICT), A., ii, 123.
toxicological detection of (GANASSINI), A., ii, 867.
detection of, in animals (DE DOMINICUS), A., ii, 746.
thiocyanates, and chlorides, titrimetric estimation and separation of (RUPP), A., ii, 867.
estimation of carbon, hydrogen, and nitrogen in (MULLER), A., ii, 767.
Cyanides, preparation of, from ferrocyanides (GROSSMANN'S CYANIDE PATENTS SYNDICATE), A., i, 123.
Cyanogen iodide, estimation of, in presence of iodine (MILBAUER and HAC), A., ii, 489.
Cyanogen iron compounds, blue (HOFMANN, HEINE, and HÖCHTLEN), A., i, 38; (HOFMANN and RESENSCHECK), A., i, 756.
Cyanomaclurin, formula of, and its derivatives (PERKIN), T., 715; P., 160.
Cyanuric acid, isomeric esters (HANTZSCH and BAUER), A., i, 330; (DIELS), A., i, 331.
Cyanuric acid ureide. See Tricyanocarbamide.
Cyclene, formula of (MOYCHO and ZIENKOWSKI), A., i, 711.
bromide. See Pinene bromide, solid.

Cyclic compounds (MARKOWNIKOFF), A., i, 141.
Cymene, latent heat of evaporation of (BROWN), T., 268; P., 75.
electrolytic oxidation of (LAW and PERKIN), A., i, 761.
o-**Cymene**, synthesis of derivatives of (KAY and PERKIN), T., 1066; P., 216.
m-**Cymene**, synthesis of derivatives of (PERKIN and TATTERSALL), T., 1083; P., 217.
Cystein (NEUBERG and MAYER), A., i, 567, 568.
and its benzoyl derivative (ERLENMEYER and STOOP), A., i, 120.
iso-**Cystein**, *iso*-**Cysteinic acid**, and *iso*-**Cystine** (GABRIEL), A., i, 265.
Cystine (FISCHER and SUZUKI), A., ii, 736.
synthesis of (ERLENMEYER and STOOP), A., i, 119.
relation of, to sulphur metabolism (ROTHERA), A., ii, 267.
acyl derivatives of (FISCHER and SUZUKI), A., i, 30.
Cystines, calculus- and protein-, and their derivatives (NEUBERG and MAYER), A., i, 567.
composition of (LOEWY and NEUBERG), A., ii, 103.
d-, *l*-, and *r*-protein-, and their derivatives (NEUBERG and MAYER), A., i, 568.
Cystinuria (LOEWY and NEUBERG), A., ii, 103.
metabolism in (ALSBERG and FOLIN), A., ii, 544.
feeding on mono-amino-acids in (SIMON), A., ii, 741.
cadaverine and putrescine in cases of (BÖDTKER), A., ii, 741.
excretion of leucine and tyrosine in a case of (ABDERHALDEN and SCHITTENHELM), A., ii, 741.
Cytolysins, plurality of, in snake venom (FLEXNER and NOGUCHI), A., ii, 107.

D.

Danialbans, α- and β- (TSCHIRCH and MÜLLER), A., i, 454.
Datura, alkaloids from (SCHMIDT; KIRCHER), A., i, 717.
Datura Stramonium, quantitative investigation of the distribution of the alkaloids in the organs of (FELDHAUS), A., ii, 648.
Deaminoalbumins (LEVITES), A., i, 104.
Decahydro-β-naphthol and its acetyl derivative and phenylcarbamate (LEROUX), A., i, 278.
Decahydro-β-naphthylamine and its additive salts (LEROUX), A., i, 601.
Decahydro-β-naphthyl ketone and its oxime, phenylhydrazone, semicarbazone, and sodium hydrogen sulphite derivative (LEROUX), A., i, 601.
Decanedicarboxylic acids. See Sebacic acid and Tetraethylsuccinic acid.
Decarbonised substances, estimations in (NEUMANN), A., ii, 68.
Decenoic acids. See βζ-Dimethyl-Δ^{α}-octenoic acid and β-Methyl-Δ_{α}-nonenoic acid.
Decoic acids. See βζ-Dimethyloctoic acid and β-Methylnonoic acid.
Decyl alcohols. See γη-Dimethyloctyl alcohol and γ-Methylnonyl alcohol.
Dehydracetic acid, molecular refraction of (HOMFRAY), T., 1457; P., 226.
action of hydrazine and of phenylhydrazine on (STOLLÉ), A., i, 838.
Dehydrocholone (PREGL), A., i, 728.
Dehydrocorydaline and its oxime, constitution of (HAARS), A., i, 462.
De-*N*-methyldihydrothebaine and its methiodide (FREUND), A., i, 920.
Denitrification of soil (AMPOLA), A., ii, 194.
in arable soil (LÖHNIS), A., ii, 109.
See also Bacteria, denitrifying, and Soils.
Density, alteration of (KAHLBAUM and STURM), A., ii, 680.
of aqueous solutions of fatty acids (DRUCKER), A., ii, 680.
of alkali haloids (BUCHANAN), P., 122.
of two liquids, empirical relationship between the (SCHAPOSCHNIKOFF), A., ii, 373.
of solid fats and waxes, apparatus for determining the (RAKUSIN), A., ii, 303.
of solid substances in powder or in a granular form, apparatus for the determination of the (v. WROCHEM), A., ii, 506.
of sulphuric, nitric, and hydrochloric acids and ammonia, methods employed in preparing the tables of (FERGUSON), A., ii, 632.
See also Vapour density.
Density apparatus. See Pyknometer.
Density determinations with a pipette (KÜSTER and MÜNCH), A., ii, 232.
Deoxyalizarin dimethyl ether (GRAEBE), A., i, 219.

Deoxybenzoin (*phenyl benzyl ketone*), *tetra*chloro-*p*-*di*hydroxy-, and its diacetyl derivative (ZINCKE and WAGNER), A., i, 342.
p-hydroxy-, and its bromo-, iodo-, and acetyl derivatives and oxime (WEISL), A., i, 904.
*di*hydroxy-derivatives, and their diacetyl derivatives (FINZI), A., i, 906.
De-oxytetramethylhæmatoxolone (HERZIG and POLLAK), A., i, 605.
De-phenyl-*N*-methyldihydrothebaine and its additive salts and methyl and ethyl ethers (FREUND), A., i, 918.
Dermocerin (RÖHMANN), A., ii, 842.
Δ^4-Desdimethylgranatanine and **Des-ψ-dimethylgranatoline** and its isomeride (WILLSTÄTTER and VERAGUTH), A., i, 543.
Desmodium gyrans, an electrical response to excitation in (BUCHANAN), A., ii, 752.
Desmotropic compounds (DIMROTH), A., i, 98, 383, 384; (GOLDSCHMIDT), A., i, 249; (BRÜHL), A., i, 408.
Desyldimethylsulphine salts (SMILES), P., 94.
Dextrin, influence of acid, steam pressure, and time on the production of, in the hydrolysis of starch by mineral acids (PAROW), A., i, 684.
Dextrins, estimation of, in presence of starch and soluble starch (WOLFF), A., ii, 558.
Dextrose (d-*glucose*, *grape sugar*), presence of, in tannin solutions (NOVÉ), A., ii, 210.
influence of acid, steam pressure, and time on the production of, in the hydrolysis of starch by mineral acids (PAROW), A., i, 684.
effect of dextrose and certain salts on the rate of transformation of glycogen into (NEILSON and TERRY), A., ii, 736.
birotation of (BEHREND), A., i, 173.
influence of inactive substances on the rotation of (MILROY), A., i, 174.
action of inorganic compounds on the rotation of (GROSSMANN), A., i, 415; (RIMBACH and WEBER), A., i, 416.
transformation of, into lævulose (OST), A., i, 684.
transformation of, into methyliminazole (WINDAUS and KNOOP), A., i, 381.
synthesis from, of an octamethylated disaccharide (PURDIE and IRVINE), T., 1022; P., 215.
influence of phosphates on the fermentation of, by yeast juice (HARDEN and YOUNG), P., 189.
derivatives, isomeric changes of some (JUNGIUS), A., i, 573.
Dextrose (d-*glucose*, *grape sugar*), estimation of, in the presence of dextrin (RÖSSING), A., i, 685.
estimation of, in presence of starch paste (WOLFF), A., ii, 487.
estimation of, in urine (VISSER), A., ii, 359.
δ-Dextrose (RÖSSING), A., i, 684.
Diabetes (*glycosuria*) (PFLÜGER), A., ii, 844.
in the goat deprived of its mammary glands (PORCHER), A., ii, 469, 600.
production and inhibition of, in rabbits by salts (FISCHER), A., ii, 103, 741.
ether-, and the effect of intravenous oxygen on it (SEELIG), A., ii, 469.
experimental (UNDERHILL), A., ii, 187, 844; (MACLEOD and DOLLEY), A., ii, 544.
pancreatic (PFLÜGER), A., ii, 100, 469.
Diabetes mellitus (LUSK and MANDEL), A., ii, 187.
composition of the blood in (ERBEN), A., ii, 741.
Diacetin, α-bromo-, α-chloro-, and α-iodo- (ACEÑA), A., i, 7.
Diacetoacetic acid, ethyl ester (MICHAEL), A., i, 564.
Diacetonealkamines, derivatives of (KOHN), A., i, 928.
Diacetoxy-. See also under the parent Substance.
2:3-Diacetoxyxanthen and 7-bromo- (HEINTSCHEL), A., i, 809.
Diacetyl-. See also under the parent Substance.
Diacetylacetanilide (DIECKMANN, HOPPE, and STEIN), A., i, 136.
Diacetylacetone, molecular refractions of (HOMFRAY), T., 1451; P., 226.
1:5-Diacetylbenzene, 2:4-*di*hydroxy-, and its ethers, oximes, and aldehydic derivatives (EIJKMAN, BERGEMA, and HENRARD), A., i, 359.
Diacetylbromoglycuronic lactone (NEUBERG and NEIMANN), A., i, 412.
αβ-Diacetylbutyric acid, ethyl ester (KORSCHUN), A., i, 373.
Diacetylcyanohydrazine (RINMAN), A., i, 389.
3:5-Diacetyl-2:6-dimethylpyridone (PALAZZO and ONORATO), A., i, 460.
3:5-Diacetyl-2:6-dimethylpyrone and the action of hydroxylamine on (PALAZZO and ONORATO), A., i, 459.
3:5-Diacetyl-2:6-diphenylpyrone (VAILLANT), A., i, 460.
Diacetylmalonic acid, ethyl ester, action of hydroxylamine on (PALAZZO and CARAPELLE), A., i, 858.

Diacetylsuccinic acid, ethyl ester, condensation of, with semicarbazide (BÜLOW, RIESS, and SAUTERMEISTER), A., i, 660.

Diacetyl-*d*-tartaric acid, menthyl ester, rotation and solution-volume of (PATTERSON and TAYLOR), T., 39, 126; P., 15.

Diacridine trimagnesium alkyl iodides (SENIER, AUSTIN, and CLARKE), T., 1471; P., 228.

Dialkylacetamides, bromo- (KALLE & CO.), A., i, 638.

Dialkylacetic acids, ureides of (FISCHER and DILTHEY), A., i, 35.

Dialkylacetylcarbamides, cyano- (CONRAD and ZART), A., i, 754.

5:5-Dialkylbarbituric acids (FISCHER and DILTHEY), A., i, 35.

and imino-, preparation of (MERCK), A., i, 178, 179, 751; (CONRAD), A., i, 751; (CONRAD and ZART), A., i, 754.

Dialkylcyanoacetic acids, esters, reactions of, with carbamide (MERCK), A., i, 178, 179.

Dialkylmalonylcarbamides. See 5:5-Dialkylbarbituric acids.

Dialkylmalonylguanidines. See 5:5-Dialkylbarbituric acids, imino-.

Diallyl, action of diazomethane on (AZZARELLO), A., i, 867.

γ-Diallylbutyric acid and its salts and γ-hydroxy-, and its salts, and γ-iodo- (KASANSKY), A., i, 320.

γ-Diallylbutyrolactone and its tri- and tetra-bromides (KASANSKY), A., i, 320.

Diallylconinium iodides, isomeric (SCHOLTZ), A., i, 297.

***iso*Dialuric acid**, condensation of, with thiocarbamide (BARTLING), A., i, 420.

Diamide, *di*cyano-. See Dicyanodiamide.

Diamines, new synthesis of (NEUBERG and NEIMANN), A., i, 686.

isolation of, from urine (LOEWY and NEUBERG), A., i, 158.

aromatic, action of formaldehyde and sodium hydrogen sulphite on (PRUD'HOMME), A., i, 548.

reaction of, with potassium ferricyanide (BARSILOWSKY), A., i, 549.

fatty, *N*-halogen derivatives of (CHATTAWAY), T., 381; P., 61.

primary, conversion of, into chlorinated amines and into dichlorides (v. BRAUN and MÜLLER), A., i, 634.

***m*-Diamines**, nitro-, azo-dyes from (BADISCHE ANILIN- & SODA-FABRIK), A., i, 251.

See also Amines and Bases.

Diamino-acids, synthesis of (NEUBERG and NEIMANN), A., i, 687.

polypeptides of the (FISCHER and SUZUKI), A., i, 121.

Diamonds, new experiments on the preparation of (MOISSAN), A., ii, 160, 166, 450.

specific heat of, at low temperatures (DEWAR), A., ii, 801.

Di-*sec.*-amylamine (MAILHE), A., i, 635.

9:10-Di*iso*amylanthracene (JÜNGERMANN), A., i, 796.

9:10-Diamylenedihydroanthracene (JÜNGERMANN), A., i, 796.

4:9-Dianilinoanthraquinone, 2:7-*di*bromo-1:6-*di*amino-, and its **sulphonic acid**, and **-1:6-bisdiazoaminobenzene** (SCHOLL and KRIEGER), A., i, 145.

Dianilinomaleic acid and its methyl ester, salts, and anhydride (SALMONY and SIMONIS), A., i, 632.

αγ-Dianilino-β-nitropropane and its acetyl derivatives (DUDEN, BOCK, and REID), A., i, 569.

2:4-Dianilinopyrimidine, 6-amino- (JOHNSON and JOHNS), A., i, 837.

2:6-Dianilinopyrimidine and its hydrochloride (WHEELER and BRISTOL), A., i, 485.

5-bromo- (WHEELER, BRISTOL, and JOHNSON), A., i, 483.

2:5-Di-*p*-anisylpyrazine (RIMINI), A., i, 198.

Dianthracene (LUTHER and WEIGERT), A., ii, 785.

Di-1-anthramine (DIENEL), A., i, 768.

Dianthranol ether (LIEBERMANN and MAMLOCK), A., i, 521.

αγ-Diarachin, synthesis of (GRÜN), A., i, 562.

Diarylethylenediamines, di-α-bromoisovaleryl derivatives, reactions of (BISCHOFF), A., i, 157.

Diastase, malt, action of, on artificial starches (ROUX), A., i, 624.

saccharifying, influence of the liquefaction of starch on its transformation by (FERNBACH and WOLFF), A., i, 624.

Diastases in wine diseases (MALVEZIN), A., ii, 749.

Diazoamines, influence of substitution on the formation of (MORGAN and WOOTTON), T., 935; P., 179; (MORGAN and CLAYTON), T., 944; P., 182.

Diazoamino-*p*-anisole and **-*p*-phenetole** (BUSCH and BERGMANN), A., i, 310.

Diazoamino-compounds, new syntheses of (DIMROTH), A., i, 311.

Diazoamino-compounds from diphenylamine and the homologues of aniline and the naphthylamines (VIGNON and SIMONET), A., i, 397.
secondary (VIGNON and SIMONET), A., i, 494.
Diazoamino-*p*-toluene, conversion of, into aminoazo-*p*-toluene in the solid state (JUNGIUS), A., i, 555.
Diazobenzene, limits of coupling of, with aniline (VIGNON), A., i, 250.
salts, action of, on iminazoles (PAULY), A., i, 494.
action of, on malonic acid (BUSCH and WOLBRING), A., i, 493.
chloride, action of zinc ethyl on (TICHWINSKY), A., i, 92.
Diazobenzene, *p*-amino-, carbonate and nitrite, *N*-benzoyl derivatives of (MORGAN and MICKLETHWAIT), T., 922; P., 180.
*s-tri*bromo-, transformations of derivatives of (ORTON), T., 99; P., 12.
*di*chloro-, perbromide of (NOELTING and KOPP), A., i, 872.
p-nitro-, chloride, velocity of decomposition of (SCHWALBE), A., i, 618, 843.
Diazobenzenemethylamine. See Phenylmethyltriazen.
Diazobenzene-5-sulphonic acid, 2:6-*di*bromo-3-nitro- and 3-nitro- (ZINCKE and KUCHENBECKER), A., i, 488.
Diazo-compounds (ZINCKE), A., i, 486.
new method of formation of (SCHMIDT), A., i, 951.
constitution and colour of (ARMSTRONG and ROBERTSON), T., 1280; P., 180; (HANTZSCH), P., 289.
structure of, in relation to their optical properties (ARMSTRONG and ROBERTSON), T., 1272; P., 180.
ultra-violet absorption spectra of, in relation to their constitution (DOBBIE and TINKLER), T., 273; P., 75.
action of, on primary aliphatic amines (DIMROTH), A., i, 618.
Diazoindoles (CASTELLANA and D'ANGELO), A., i, 940.
Diazoles, formation of (STOLLÉ and KIND), A., i, 96.
Diazomethane, action of, on ethylene and diallyl (AZZARELLO), A., i, 867.
Diazomethylindole and its additive salts (CASTELLANA and D'ANGELO), A., i, 941.
Diazonium salts. See Diazobenzene salts.
Diazophenylindole and its additive salts (CASTELLANA and D'ANGELO), A., i, 940.
Diazo-di- and **-tri-phenylpyrroles** and their hydrochlorides (ANGELICO), A., i, 938.
Diazo-reactions, action of light on (ORTON, COATES, and BURDETT), P., 168.
in the diphenyl series (CAIN), T., 5.
Diazo-salts, rate of decomposition of (SCHWALBE), A., i, 618, 843; (CAIN), A., i, 724.
action of water on (CAIN and NORMAN), P., 206, 308.
2-Diazotoluene, 3:5-*di*nitro-, nitrate of and its β-naphthylamine derivative, and perbromide (ZINCKE and MALKOMESIUS), A., i, 487.
2-Diazotoluene-4-sulphonic acid, 3:5-*di*nitro-, and **4-Diazotoluene-6-sulphonic acid**, 2-nitro- (ZINCKE and KUCHENBECKER), A., i, 488.
Diazoxides, normal, from the interaction of nitrosobenzenes and hydroxylamine (HANTZSCH), A., i, 617.
Diazo-xylene, 3:5-*di*chloro-, perbromide and platinichloride, and perchloride, and its compounds with dimethylaniline and β-naphthol (ZINCKE and ELLENBERGER), A., i, 486.
nitro-, and its compound with dimethylaniline, and perbromide (ZINCKE and ELLENBERGER), A., i, 486.
4-Diazo-xylene-6-sulphonic acid, 2-nitro-, and its compounds with dimethylaniline and naphthylamine (ZINCKE and MAUÉ), A., i, 487.
Di-*p*-benzaldehydeiodonium hydroxide and its derivatives (WILLGERODT and BOGEL), A., i, 901.
Dibenzenedisulphonic acid. See Diphenyldisulphonic acid.
Dibenzenesulphonbenzidine, methylation of (HINSBERG), A., i, 241.
Dibenzenesulphon-ψ-cumidide, **-ethylamide**, and **-*o*-** and **-*p*-xylidides** (HINSBERG and KESSLER), A., i, 339.
Dibenzenesulphondiethyl-*m*-phenylenediamine (HINSBERG and KESSLER), A., i, 723.
Dibenzenesulphonphenylenediamines, *m*- and *p*-, action of alkylene haloids on (HINSBERG and KESSLER), A., i, 722.
***o*-Dibenzhydrylbenzene** (GUYOT and CATEL), A., i, 541.
Dibenzhydroxamic acid (MARQUIS), A., i, 524.
action of alkali hydroxide on (MOHR), A., i, 274.
Dibenzoyl-. See also under the parent Substance.

o-**Dibenzoylbenzene** and its diphenylhydrazone and phthalazine (GUYOT and CATEL), A., i, 226, 540.

Dibenzoylethane-2:2′-dicarboxylic acid and *di*bromo-, and its anhydride and its dianil (REISSERT and ENGEL), A., i, 898.

Dibenzoylmethane, Wislicenus's supposed isomeride of (SLUITER), A., i, 796.

αα-Dibenzoylpropane (SLUITER), A., i, 796.

Dibenzoylstilbenes, *cis-* and *trans-*, and the action of hydrazine on (JAPP and WOOD), T., 707; P., 154.

αβ-Dibenzoylstyrenes, *cis-* and *trans-*, and the action of hydrazine on (JAPP and WOOD), T., 707; P., 154.

Dibenzyl, 2-hydroxy- (v. KOSTANECKI, ROST, and SZABRAŃSKI), A., i, 341; (v. KOSTANECKI), A., i, 433.

Dibenzyl-acetylcarbamide, -dibenzylacetamide, and **-malonamide**, cyano- (CONRAD and ZART), A., i, 754.

Dibenzylamine and *di-o*-chloro- (FRANZEN), A., i, 427.

Dibenzylaminoazobenzene (VIGNON and SIMONET), A., i, 495.

5-Dibenzylamino-1-phenyl-3-methylpyrazole and its additive salts (MICHAELIS and BLUME), A., i, 479.

5:5-Dibenzylbarbituric acid, 4-imino- (CONRAD), A., i, 752.

1:3-Dibenzylbenziminazole and its salts and carbinol (FISCHER and VEIEL), A., i, 245.

Dibenzylcyanoacetic acid, *tetra*bromo-*di-p*-amino-, and its amide (ROMEO and MARCHESE), A., i, 442.

Dibenzylideneacetone (v. BAEYER), A., i, 281; (v. BAEYER and HALLENSLEBEN), A., i, 358.

union of, with mercaptans (RUHEMANN), T., 22.

bromides (VORLÄNDER and SIEBERT), A., i, 793.

α-Dibenzylideneacetonehydroxylaminoxime, reduction of (MINUNNI and CIUSA), A., i, 245.

Dibenzylidene*di*aminoguanidine and its hydrochloride (STOLLÉ and HOFMANN), A., i, 28.

1:3-Dibenzylideneamino-2-phenyl-2:3-naphthadihydroglyoxaline (FRANZEN), A., i, 244.

Dibenzyl ketone, condensation of, with aldehydes under the influence of hydrochloric acid (HERTZKA), A., i, 291.

*p-di*nitro-, and its oxime, phenylhydrazone, and thio-derivative (MANCHOT and KRISCHE), A., i, 142.

Dibenzylmalononitrile, *di-p*-amino- and *tetra*bromo*di-p*-amino-, and their diacetyl derivatives and salts, and *di*chloro*di-p*-amino- (ROMEO and MARCHESE), A., i, 441.

5:5-Dibenzylmalonylcarbamide. See 5:5-Dibenzylbarbituric acid.

1:3-Dibenzyl-2-methylbenziminazole-2-ol and its platinichloride (FISCHER and VEIEL), A., i, 246.

2:4-Dibenzyl-1-methyl-3-*cyclo*hexanol (HALLER and MARCH), A., i, 276.

2-Dibenzyloxyacetic acid and its ethyl ester (v. KOSTANECKI, ROST, and SZABRAŃSKI), A., i, 341.

s-**Dibenzyl-*o*-phenylenediamine** and its reactions (FISCHER and VEIEL), A., i, 245.

Dibenzylphthalide (BAUER), A., i, 210.

s-**Dibenzyltartaric acid** and its salts (ERLENMEYER), A., i, 784.

Di-*sec.*-butylamine and its additive salts (MAILHE), A., i, 635.

Dibutyryl and its dioxime (LOCQUIN), A., i, 20; (BOUVEAULT and LOCQUIN), A., i, 560, 573.

Dibutyryloximes, *n-* and *n-iso-* (LOCQUIN), A., i, 19.

Dicamphorquinone and *iso*-**Dicamphorquinone** (ODDO), A., i, 448.

s-**Dicamphorylcarbamide** (FORSTER and FIERZ), T., 120; P., 21.

Dicaproin (BOUVEAULT and LOCQUIN), A., i, 561.

Dicarbethoxyacetanilide (DIECKMANN, HOPPE, and STEIN), A., i, 136.

Dicinnamylideneacetone octabromide (VORLÄNDER and SIEBERT), A., i, 793.

Dicoumarin ketone and its oxime (KNOEVENAGEL and LANGENSIEPEN), A., i, 64.

Dicyanodiamide (*cyanoguanidine*), action of, on the primary aromatic amine hydrochlorides (A. and L. LUMIÈRE and PERRIN), A., i, 249.

reactions of (MERCK), A., i, 670.

Didiphenylenepyrone (MEYER and SPENGLER), A., i, 362.

Didiphenylenethiopinacone (MANCHOT and KRISCHE), A., i, 142.

Dielectric constants. See under Electrochemistry.

Diethanoldiacetonealkamine (KOHN), A., i, 929.

2:2′-Diethoxybenzophenone, 5:5′-*di*bromo-, and its phenylhydrazone (DIELS and BUNZL), A., i, 432.

2:2′-Diethoxydiphenylmethane, 5:5′-*di*bromo- (DIELS and BUNZL), A., i, 432.

9:9-Diethoxyfluorene (SMEDLEY), T., 1252.

ββ-Diethoxy-α-methylvaleric acid, ethyl ester (TSCHITSCHIBABIN), A., i, 283.

2-*op*-Diethoxyphenyl-4-methylene-1:4-benzopyran, 5:7-, 6:7-, and 7:8-*di*-hydroxy-, and their salts and diacetyl derivatives (BÜLOW [and SAUTERMEISTER), A., i, 150.

4:6-Diethoxy*iso*phthalic acid (EIJKMAN, BERGEMA, and HENRARD), A., i, 359.

3:5-Diethoxytritanic acid and its ethyl ester (v. LIEBIG), A., i, 782.

γγ-Diethoxyvaleric acid, propyl ester, and its reduction (BOUVEAULT and BLANC), A., i, 13.

Diethylacetoacetaldehyde and its semicarbazone (COUTURIER and VIGNON), A., i, 571.

Diethylamine and water, mutual solubilities of (LATTEY), A., i, 747.

Diethylaminoazobenzene (VIGNON and SIMONET), A., i, 495.

Diethylaminobenzeneazobenzene and its additive salts (GNEHM and BAUER), A., i, 831.

***p*-Diethylaminobenzylidene-aniline** and **-semicarbazide** (F. and L. SACHS), A., i, 190, 274.

3-Diethylamino-4:6-bisdinaphthaxanthylbenzene, 1-hydroxy- (FOSSE and ROBYN), A., i, 607.

Diethylaminoconiine and its additive salts (LÖFFLER and KIRSCHNER), A., i, 939.

2-β-Diethylamino-ethyl- and **-propyl-piperidines** and their additive salts (LÖFFLER and KIRSCHNER), A., i, 939.

4-Diethylamino-1-α-ethylpropylbenzene and its additive salts (F. and L. SACHS), A., i, 191, 274.

***o*-Diethylamino*cyclo*hexanol** and its hydrochloride (BRUNEL), A., i, 869.

2-β-Diethylaminopropylpyridine and its additive salts (LÖFFLER and KIRSCHNER), A., i, 938.

Diethylaniline, *p*-nitro- and *p*-nitroso-, isomorphism and miscibility of (JAEGER), A., ii, 514.

5:5-Diethylbarbituric acid (*veronal*), estimation of, in urine (FISCHER and v. MERING), A., ii, 776.

4-imino- (*iminoveronal*), and its hydrochloride (CONRAD), A., i, 752; (CONRAD and ZART), A., i, 754.

Diethylcamphoformolaminecarboxylic acid, diethylamine salt (TINGLE and HOFFMANN), A., i, 800.

Diethylcarbamic acid, amino-*o*-methoxyphenyl ester and its acetyl derivative and carbamide, and nitro-*o*-methoxyphenyl ester, and *p*-aminophenyl ester and its acetyl derivative and carbamide, and *p*-nitrophenyl ester (A. and L. LUMIÈRE and PERRIN), A., i, 588.

Diethylcetrol (HESSE), A., i, 139.

Diethylenediamine. See Piperazine.

Diethylenediaminechromium salts (FFEIFFER, KOCH, LANDO, and TRIESCHMANN), A., i, 34.

Diethylenedipiperidinium chloride and picrate (KNORR, HÖRLEIN, and ROTH), A., i, 834.

αγ-Diethylglutaric acid, β-hydroxy-, and its ethyl ester, and acetyl derivative (BLAISE and LUTTRINGER), A. i, 506.

ββ-Diethylglycidic acid, ethyl ester (CLAISEN), A., i, 288.

Diethylhomorhodamine and its hydrochloride and acetyl derivative (NOELTING and DZIEWOŃSKI), A., i, 935.

Diethyl ketone ammonia (THOMAE), A., i, 684.

Diethylmalonamic acid and its ethyl ester, anilide, and sulphanilide and **Diethylmalonanilic acid** (CONRAD and ZART), A., i, 755.

Diethylmalon-amide and **-uramide** (CONRAD and ZART), A., i, 754.

Diethylmalonylcarbamide. See 5:5-Diethylbarbituric acid.

5:5-Diethylmalonylguanidine (FISCHER and DILTHEY), A., i, 37; (MERCK), A., i, 751.

4-imino- (CONRAD), A., i, 752.

5:5-Diethylmalonylthiocarbamide, 4-imino- (CONRAD), A., i, 752.

1:3-Diethylphthalazone (DAUBE), A., i, 210.

3:4-Diethylpiperidine and its derivatives (KOENIGS and BERNHART), A., i, 825.

Diethylprotocetraric acid (HESSE), A., i, 139.

3:4-Diethylpyridine and its additive salts (KOENIGS and BERNHART), A., i, 824.

5-Diethylpyrimidine, 2:4-*di*imino-6-hydroxy- and 4:6-*di*imino-2-thio- (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 671.

Diethyl-ψ-quinol, *tetra*bromo- (ZINCKE and BUFF), A., i, 882.

***s*-Diethylrhodamine** and its hydrochloride and diacetyl derivative (NOELTING and DZIEWOŃSKI), A., i, 935.

Diethylsulphamic acid and its ethyl ester (WILLCOX), A., i, 46.

Diethylthetine, *l*-menthyl ester, salts of, molecular rotations of (SMILES), T., 453; P., 93.

Diethylthioldiethoxyquinol dibenzoate (SAMMIS), A., i, 797.

1:3-Diethylxanthine, preparation of (SCARLAT), A., i, 160.

Diffusic acid and its salts (ZOPF), A., i, 789.

Diffusion, *rôle* of, during catalysis by colloidal metals and similar substances (SAND), A., ii, 233; (SENTER), A., ii, 379.
of electrolytes in water (ÖHOLM), A., ii, 147.
of salts in solution (GRAHAM), A., ii, 147.
Osmotic experiments on mixtures of alcohol and water (BARLOW), A., ii, 507.
Osmotic pressure and thermodynamical potential (VAN LAAR), A., ii, 234, 374.
nature of (BATELLI and STEFANINI), A., ii, 629.
of colloidal solutions (DUCLAUX), A., ii, 511.
Osmosis, solubility, and narcosis, theories on (TRAUBE), A., ii, 13.
through silica tubes (BELLOC), A., ii, 443.
Diformylacetone, hexaethylacetal of (WILLSTÄTTER and PUMMERER), A., i, 458.
Digestion, chemistry of (LONDON), A., ii, 730; (LONDON and SULIMA), A., ii, 838.
of proteids in the stomach (TOBLER), A., ii, 642.
in dogs with artificial anus (MAETZKE), A., ii, 837.
gastric (GRÜTZNER), A., ii, 269.
pancreatic, end-products of (KUTSCHER and LOHMANN), A., ii, 466; (LEVENE), A., ii, 732.
See also Stomach.
Digitalonic acid (KILIANI), A., i, 859.
Digitonin (KILIANI), A., i, 364.
Diglycerides, synthesis of (GRÜN), A., i, 562.
Dihaloids, Grignard's reaction with (AHRENS and STAPLER), A., i, 423, 868; (BISCHOFF), A., i, 589.
Di*cyclo*hexanesulphone (BORSCHE and LANGE), A., i, 766.
Dihexoyl and its dioxime (BOUVEAULT and LOCQUIN), A., i, 561, 573.
Di*cyclo*hexyl (BORSCHE and LANGE), A., i, 766.
Di*iso*hexylamine and its salts (SABATIER and SENDERENS), A., i, 268.
Dihydro-1-anthramine and its hydrochloride (DIENEL), A., i, 768.
Dihydro*iso*benzofuran derivatives (GUYOT and CATEL), A., i, 226, 540.
condensation of, into 9:10-substituted anthracene derivatives (GUYOT and CATEL), A., i, 516.
Dihydroberberine, a new series of bases from (FREUND and BECK), A., i, 151.
Dihydrocamphene-β-benzyl- and **-α-** and **-β-phenyl-sulphones** (POSNER and TSCHARNO), A., i, 279.
***r-cis*-Dihydrocamphoric acid** (BLANC), A., i, 683.
Dihydrocarveol, isomeric, and their derivatives (TSCHUGAEFF), A., i, 71.
8:9-Dihydrocarvone, 8-hydroxy-, and its oxime and semicarbazone (RUPE and SCHLOCHOFF), A., i, 449.
Dihydrocarvonyl-acetic acid and **-cyanoacetic acid**, ethyl ester, and its oxime (KNOEVENAGEL and MOTTEK), A., i, 61.
Dihydrocinnamic acid, benzoin ester, benzylamide, α-phenylethylamide, and piperidide of (MOHR), A., i, 428.
αβ-Dihydrocinnamylidene-acetic and **-malonic acids** (ERLENMEYER and KREUTZ), A., i, 897.
Dihydrocinnamylideneacetic acids, isomeric, formation of (RIIBER), A., i, 777.
Dihydrocuminaldehyde (SCHIMMEL & CO.), A., i, 536.
and its semicarbazone and semioxamazone (WALBAUM and HÜTHIG), A., i, 604; (WALLACH), A., i, 709.
Dihydrocuminic acid and its bromides (SCHIMMEL & CO.), A., i, 536; (WALBAUM and HÜTHIG), A., i, 604; (WALLACH), A., i, 709.
Dihydrocuminol and its derivatives from ginger grass oil (WALBAUM and HÜTHIG), A., i, 53, 603.
Dihydro*apo*harmine picrate (FISCHER and BUCK), A., i, 229.
Dihydrolaurolene and **Dihydro*iso*laurolene**, supposed identity of, with 1:1-dimethylhexahydrobenzene (CROSSLEY and RENOUF), P., 303.
Dihydro*iso*lauronic acid, isomeride of (BLANC), A., i, 681.
Dihydromenthenephenylsulphone (POSNER and TSCHARNO), A., i, 279.
***d*-$\Delta^{2(or\ 3)}$-Dihydro-1-naphthoic acid** and its salts, esters, and *p*-toluidide, and molecular transformation (PICKARD and NEVILLE), T., 1763; P., 257.
Dihydro-oxanthranol and its diacetyl derivative (GODCHOT), A., i, 201.
Dihydrophenanthranil, hydroxy-, and its acetyl derivative (JAPP and KNOX), T., 682.
Dihydrophenanthraphenazoxine, hydroxy- (KEHRMANN), A., i, 930.
Dihydrophenazine, formula of (TICHWINSKY and WOLOCHOWITSCH), A., i, 383; (SCHAPOSCHNIKOFF), A., i, 840.
acetylation of (TICHWINSKY), A., i, 383; (HINSBERG), A., i, 840.

Dihydro*iso*phoronecarboxylic acids (*ketodihydrocyclogeranic acids*), stereoisomeric (MERLING, WELDE, and SKITA), A., i, 349.

Dihydro*iso*phthalic acid (PERKIN and PICKLES), T., 310; P., 76; (GOODWIN and PERKIN), T., 853; P., 187.

$\Delta^{1:3}$-Dihydrophthalic anhydride (ABATI and DE BERNARDINIS), A., i, 600.

Dihydropinol (RUPE and SCHLOCHOFF), A., i, 450.

Dihydroquinoxalines, new series of (EKELEY and WELLS), A., i, 613.

Dihydroresorcins, *O*- and *C*-carbanilides of (DIECKMANN, HOPPE, and STEIN), A., i, 135.

Dihydro*iso*safrole, *β*-bromo-*α*-hydroxy- and *di*- and *tri*-bromo-*β*-hydroxy- (HOERING), A., i, 903, 904.

Dihydro-4-stilbazole and its additive salts and 3′-amino- (FRIEDLÄNDER), A., i, 818.

Dihydrotetrazine derivatives, formation of (BOWACK and LAPWORTH), T., 1867; P., 257.

Dihydrothebaine methiodide and its methyl ether (FREUND), A., i, 920.

2:3-Dihydrothiazoles, 2-imino- (YOUNG and CROOKES), P., 307.

4:5-Dihydrothiazoles, 2-amino- (YOUNG and CROOKES), P., 307.

Dihydrouracil, bromo-, bromothiocyano-, and thiocyano- (GABRIEL), A., i, 265, 481.

Di-imines, coloured and colourless (PRINGSHEIM), A., i, 934.

1:3-Diketoacetylhydrindene. See Acetylindanedione.

Diketo*iso*butylpiperazine (FISCHER), A., i, 688; (FISCHER and BRUNNER), A., i, 690; (FISCHER and WARBURG), A., i, 691.

αβ-Diketobutyric acid, esters, reactions of (BOUVEAULT and WAHL), A., i, 410.

and their hydrates (BOUVEAULT and WAHL), A., i, 409.

phenylhydrazones of, constitution of (WAHL), A., i, 474.

Diketodiethylpiperazine (FISCHER and RASKE), A., i, 693.

Diketoethylpiperazine (FISCHER and RASKE), A., i, 693.

Diketomethyl*iso*butylpiperazine (FISCHER and WARBURG), A., i, 691.

2:6-Diketo-4-methyl-5-*n*-propyl-Δ^3-tetrahydropyridine, 3-cyano-. See Methyl-*n*-propylglutaconimide.

2:6-Diketo-4-methyl-Δ^4-tetrahydropyridyl-3-acetic acid, 5-cyano-, and its salts (GUARESCHI), A., i, 823.

α-Diketones, preparation of (BOUVEAULT and LOCQUIN; LOCQUIN), A., i, 20.

***s*-α-Diketones**, preparation of (BOUVEAULT and LOCQUIN), A., i, 561, 573.

β-Diketones, interaction of, with phenylcarbimide (DIECKMANN, HOPPE, and STEIN), A., i, 135.

azo-dyes from (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 723.

γ-Diketones, unsaturated, action of hydrazine on (JAPP and WOOD), T., 707; P., 154.

Diketophenylpiperazine (FISCHER and SCHMIDLIN), A., i, 694.

1:4-Diketo-2-phenyl-1:2:3:4-tetrahydrophthalazine (DUNLAP), A., i, 830.

2:4-Diketo-3-phenyltetrahydroquinazoline, bromo- (KUNCKELL), A., i, 382.

2:4-Diketo-3-phenyl-1:2:3:4-tetrahydroquinazoline (v. PAWLEWSKI), A., i, 246.

2:5-Diketopiperazine-3:6-diacetic acid, ethyl ester, and amide (FISCHER and KOENIGS), A., i, 32.

Diketopiperazines (FISCHER), A., i, 688.

2:4-Diketotetrahydroquinazoline, derivatives of (KUNCKELL), A., i, 382.

2:4-Diketo-3-*o*- and -*p*-tolyltetrahydroquinazolines (KUNCKELL), A., i, 382.

Dilactic acid, *β-di*thio- (HOLMBERG), A., i, 324.

Dilatometric measurements of tautometric substances (GIOLITTI), A., ii, 12.

Dilemene from oil of patchouli (DE JONG), A., i, 802.

Dilituric acid and its salts (BARTLING), A., i, 420.

***s*-Dimelilotylhydrazide** (PSCHORR and EINBECK), A., i, 589.

Dimercurammonium. See under Mercury.

2:5-Dimethoxyacetophenone and its phenylhydrazone (KAUFFMANN and BEISSWENGER), A., i, 280; ii, 218.

***o*-Dimethoxyanthraquinones**, preparation of (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 654.

1:2-Dimethoxybenzene. See Veratrole.

1:4-Dimethoxybenzene. See Quinol dimethyl ether.

2:5-Dimethoxybenzophenone and its phenylhydrazone (KAUFFMANN and GROMBACH), A., i, 280.

2:6-Dimethoxybenzoquinone and 3-*mono*- and 3:5-*di*-chloro- (GRAEBE and HESS), A., i, 698.

Dimethoxybenzyloxamic acid (RIMINI), A., i, 199.

3:4-Dimethoxychalkone, 2′-hydroxy- (BERSTEIN, FRASCHINA, and v. KOSTANECKI), A., i, 606.

3:4′-Dimethoxychalkone, 2′-hydroxy-, and its acetyl derivative (v. KOSTANECKI and WIDMER), A., i, 78.

3:6-Dimethoxy-4-dimethylaminoethoxyphenanthrene and its picrate and methiodide (KNORR), A., i, 813.

Dimethoxydiphenyl, *di*nitro*di*hydroxy- (KÜHLING), A., i, 888.

4:5-Dimethoxydiphenyliminazolone (BILTZ and STELLBAUM), A., i, 674.

5:6-Dimethoxydiphenyltriazine, 3-hydroxy-, and its acetyl derivative (BILTZ and ARND), A., i, 675.

3′:4′-Dimethoxy-flavanone and 3-bromo- and 3-*iso*nitroso-, and **-flavone** (BERSTEIN, FRASCHINA, and v. KOSTANECKI), A., i, 606.

7:2′-Dimethoxy-flavanone and 3-*iso*nitroso-, and **-flavonol** and its acetyl derivative (v. KOSTANECKI and v. SZLAGIER), A., i, 78.

7:3′-Dimethoxy-flavanone and 3-*iso*nitroso-, and **-flavonol** and its acetyl derivative (v. KOSTANECKI and WIDMER), A., i, 78.

7:4′-Dimethoxy-flavanone and 3-*iso*nitroso-, and **-flavonol** and its acetyl derivative (JUPPEN and v. KOSTANECKI), A., i, 79.

3′:4′-Dimethoxyflavonol and its acetyl derivative (BERSTEIN, FRASCHINA, and v. KOSTANECKI), A., i, 607.

2:4-Dimethoxy-3′:4′-methylenedioxystilbene-β-carboxylic acid (v. KOSTANECKI and SULSER), A., i, 353.

2:4-Dimethoxy-5-methylpyrimidine and 6-chloro- (GERNGROSS), A., i, 943.

2:5-Dimethoxy-1-α-mono- and **-αβ-dimethylvinylbenzenes** (KAUFFMANN and BEISSWENGER), A., i, 280; ii, 218.

Dimethoxyphenyl-aminoacetone and its picrate, and **-nitroacetone** (RIMINI), A., i, 199.

α-3:4-Dimethoxyphenyl-αβ-*di*bromo- and **-β-bromo-α-hydroxy-ethanes** (BARGER and JOWETT), T., 972; P., 205.

3:4-Dimethoxyphenyl-α-cyanoacrylic acid, bromo-, ethyl ester (PICCININI), A., i, 599.

***s*-Di-*o*-methoxyphenylpropionylhydrazide** (PSCHORR and EINBECK), A., i, 590.

2:5-Dimethoxy-α-phenylstilbene and its bromo-derivatives (KAUFFMANN and GROMBACH), A., i, 281.

4:6-Dimethoxy*iso*phthalic acid (EIJKMAN, BERGEMA, and HENRARD), A., i, 359.

2:3-Dimethoxypyrone-6-carbonylhydroxamic acid and its barium salt (AZZARELLO), A., i, 917.

2:3-Dimethoxy-γ-pyrone-6-carboxylic acid and its methyl ester (PERATONER and CASTELLANA), A., i, 807.

Dimethoxypropionic acid, esters, amide, and methylamide, preparation and rotation of (FRANKLAND and GEBHARD), T., 864; P., 189.

Dimethoxy*iso*quinoline and its additive salts (DECKER and KOCH), A., i, 472.

Dimethoxy*iso*quinolone and its 2-benzyl and 2-methyl derivatives (DECKER and KOCH), A., i, 473.

Dimethoxystilbeneacetone (v. LIPPMANN and FRITSCH), A., i, 443.

2:4-Dimethoxystilbene-β-carboxylic acid (v. KOSTANECKI and SULSER), A., i, 352.

3:4-Dimethoxystyrene (BARGER and JOWETT), T., 972; P., 205.

3:5-Dimethoxytritanic acid and its salts, methyl ester, and ether (v. LIEBIG), A., i, 782.

Dimethylacetylacetone and its disemicarbazone (SALKIND), A., i, 733.

Di-5-methylacridine trimagnesium alkyl iodides (SENIER, AUSTIN, and CLARKE), T., 1472; P., 228.

Dimethylacrylic acid, preparation of (BARBIER and LÉSER), A., i, 628.

"Dimethyladipic acid" (NOYES and DOUGHTY), A., i, 321.

αα-Dimethyladipic acid and δ-cyano-, ethyl ester and anilic acid (BLANC), A., i, 680.

ββ-Dimethyladipic acid (CROSSLEY and RENOUF), T., 1496; P., 209.
and its anhydride and anilide (BLANC), A., i, 682.
synthesis of (BLANC), A., i, 15.

***s*-Dimethylallene**, action of hypochlorous acid on (SMIRNOFF), A., i, 172.

Dimethylamine, action of, on furfuraldehyde (LITTERSCHEID), A., i, 76.

Dimethylamino*tert.*-amyl alcohol. See Methylethyldimethylaminomethylcarbinol.

1:5-Dimethylaminoanthraquinone, 4:8-*di*nitro-, and its nitrate (FARBENFABRIKEN VORM. F. BAYER & CO.), A., i, 362.

Dimethyl*di*aminoanthraquinones, 1:6- and 1:9- (FARBENFABRIKEN VORM. F. BAYER & CO.), A., i, 145.

Dimethylaminoantipyrine. See Aminopyrine.

p-**Dimethylaminobenzaldehyde**, action of magnesium organic compounds on (F. and L. SACHS), A., i, 202.
behaviour of, in animal metabolism (JAFFÉ), A., ii, 186.
p-**Dimethylaminobenzoic acid** (JOHNSON), P., 156.
5-*p*-**Dimethylaminobenzylidenerhodanic acid** and its 3-methyl, 3-ethyl, and 3-allyl derivatives (ANDREASCH and ZIPSER), A., i, 932.
p-**Dimethylaminobenzylidenesemicarbazide** (F. and L. SACHS), A., i, 191, 274.
p-**Dimethylaminobenzylidenetetrazoline** (RUHEMANN and MERRIMAN), T., 1778.
Dimethylaminocamphor (FORSTER), T., 239; P., 23.
Dimethylaminodiamylmethane. See Dimethylaminoundecane.
Dimethylaminodihydrobenzene, bromoderivatives, and their salts (JACKSON and CLARKE), A., i, 768.
Dimethylaminoethyl alcohol and **ether**, melting point, specific gravity, and refractive index of (KNORR and MEYER), A., i, 748.
4-Dimethylamino-1-α-ethylpropylbenzene and its additive salts (F. and L. SACHS), A., i, 191, 274.
α-**Dimethylamino**-β-*aci*-*di*-**nitroethane** (DUDEN, BOCK, and REID), A., i, 568.
Dimethylamino*cyclo***octadienes**, isomeric, and their methiodides (WILLSTÄTTER and VERAGUTH), A., i, 515.
8-Dimethylaminoparaxanthine and its sodium salt (BOEHRINGER & SÖHNE), A., i, 230.
p-**Dimethylaminophenyl-benzyl-, -ethyl-, -methyl-**, and **-α-naphthylcarbinols** and their salts (F. and L. SACHS), A., i, 202.
p-**Dimethylaminophenyldi-2-methyl-1-ethylindylmethane**, *o*-chloro- (FREUND and LEBACH), A., i, 665.
p-**Dimethylaminophenyldi-2-methylindyl-** and **-indolidene-methanes** and their *o*-chloro-derivatives (FREUND and LEBACH), A., i, 664.
γ-**Dimethylamino**-β-**phenylpropyl alcohol** and its additive salts and benzoyl derivative (FOURNEAU), A., i, 57.
p-**Dimethylaminophenylpropylene** and its platinichloride (F. and L. SACHS), A., i, 202.
4-Dimethylamino-1-*iso***propylbenzene**. See *p*-*iso*Propyldimethylaniline.
p-**Dimethylaminostilbene** and its salts (F. and L. SACHS), A., i, 202.
2-Dimethyl-*p*-**aminostyryl**-β-**naphthathiazole** and its dihydrochloride (RUPE and SCHWARZ), A., i, 83.
Dimethylaminotetrahydrobenzene, *tetra*bromo-, dibromide of (JACKSON and CLARKE), A., i, 769.
8-Dimethylaminotheophylline (BOEHRINGER & SÖHNE), A., i, 231.
p-**Dimethylaminothiobenzamide** (F. and L. SACHS), A., i, 191, 274.
p-**Dimethylaminotriphenylmethane** (F. and L. SACHS), A., i, 191, 274.
Dimethylaminoundecane (BOUVEAULT), A., i, 116.
Dimethyl*iso***amylamine**, preparation of (CLARKE), A., i, 428.
Dimethylaniline, condensation of, with formisobutaldol (SAMEC), A., i, 489.
bromine derivatives (JACKSON and CLARKE), A., i, 768.
p-bromo-, dibromide of (HANTZSCH and GRAF), A., i, 575.
o-, *m*-, and *p*-iodo-, preparation of (v. BAEYER), A., i, 767.
op-di- and *tetra*-nitro- (SCHMIDT), A., i, 951.
nitroso-, melting point curves of additive compounds of (KREMANN), A., ii, 78.
Dimethylanilinesulphurtrioxide and its derivatives (WILLCOX), A., i, 45.
2:7-Dimethylanthracene (LAVAUX), A., i, 43, 125, 698.
Dimethylanthracenes, separation of the three, obtained in the action of methylene chloride and aluminium chloride on toluene (LAVAUX), A., i, 125.
2:5-Dimethylatropic acid and its dibromide (BISTRZYCKI and REINTKE), A., i, 285.
3:5-Dimethylbenzaldehyde and its semicarbazone (LAW and PERKIN), A., ii, 40.
1:3-Dimethylbenziminazole-2-ol, 5-bromo-, and its iodide (FISCHER and MOUSON), A., i, 246.
1:4-Dimethylbenzoyl-acetic and **-propionic acids**, ethyl esters (MARGUERY), A., i, 528.
Dimethylbis-oxadiazole and **-thiodiazole** and their silver nitrate compounds (STOLLÉ and KIND), A., i, 96.
Dimethylbutenylcarbinol, synthesis of, and its phenylurethane (PERKIN and PICKLES), T., 657; P., 131.
Dimethyl*iso***butylcarbinyl iodide** (CHONIN), A., i, 729.
αα-**Dimethylbutyric acid**, γ-bromo-, ethyl ester (BLANC), A., i, 681.
αα-**Dimethylbutyrolactone**, hydrazine compound of (BLANC), A., i, 680.

ββ-Dimethylbutyrolactone (BLANC), A., i, 631.

Dimethylbutyrolactones, αγ- and **βγ-**, hydrazine compounds of (BLAISE and LUTTRINGER), A., i, 330.

1:2-Dimethylcamphanediol (FORSTER), T., 241.

Dimethylcamphoformolaminecarboxylic acid, dimethylamine salt (TINGLE and HOFFMANN), A., i, 800.

as-**Dimethylcarbamide,** decomposition of (FAWSITT), T., 494 ; P., 115.

2:4′-Dimethylchalkone, 2′-hydroxy- (v. KOSTANECKI and v. SZLAGIER), A., i, 78.

2:3-Dimethyl-3-*di*chloromethylindolenine and its oxime, picrate, and methiodide (PLANCHER and CARRASCO), A., i, 298.

1:3-Dimethyl-3-*di*chloromethyl-2-methyleneindoline (PLANCHER and CARRASCO), A., i, 666.

Dimethylcreatinine platinichloride (KORNDÖRFER), A., i, 152.

Dimethyldiacetonealkamine aurichloride (KOHN), A., i, 929.

1:3-Dimethyl-5:5-diethylbarbituric acid and 4-imino-, and its additive salts (CONRAD and ZART), A., i, 753.

2:5-Dimethyldihydroatropic acid (BISTRZYCKI and REINTKE), A., i, 285.

2:7-Dimethyl-5:10-dihydro-1:3:6:8-naphthatetrazine, 4:9-*di*hydroxy- (BOGERT and DOX), A., i, 949.

1:2-Dimethyldihydroquinoline (FREUND and SPEYER), A., i, 157.

3:4-Dimethyl-2:3-dihydrothiazole, 2-imino-, *N*-acetyl derivative of (YOUNG and CROOKES), P., 308.

4:4′-Dimethyldipyridyl and its additive salts (AHRENS), A., i, 232.

5:5′-Dimethyl-8:8′-diquinolyl and its salts (v. NIEMENTOWSKI and SEIFERT), A., i, 300.

Dimethyleneacetone, *di*hydroxy-, and its ethers and benzoates (WILLSTÄTTER and PUMMERER), A., i, 457.

4:5-Dimethylenetetra-oxydiphenyliminazolone (BILTZ and STELLBAUM), A., i, 674.

Dimethylethylbutenylcarbinol (PERKIN and PICKLES), T., 659 ; P., 131.

Dimethylfluoran, *di*bromo- and *di*chloro- (BADISCHE ANILIN- & SODA-FABRIK), A., i, 149.

αβ-Dimethylglutaconic acid, formation of (ROGERSON and THORPE), T., 1700 ; P., 239 ; (DARBISHIRE and THORPE), T., 1714 ; P., 239.

identity of, with **βγ-**dimethylglutaconic acid (THORPE), T., 1671 ; P., 239.

αβ-Dimethylglutaconic acid and its silver salt, anhydride, and anilic acid, and α-cyano-, ethyl ester (ROGERSON and THORPE), T., 1695 ; P., 239.

Dimethylglutaric acids, αα- and **ββ-**, and their β-naphthylamides (BLANC), A., i, 680.

ββ-Dimethylglycidic acid, ethyl ester, and sodium salt (CLAISEN), A., i, 288.

4:5-Dimethylglyoxaline picrate (JOWETT), T., 407 ; P., 116.

βζ-Dimethylheptane-βζ-diol and its diacetate (RUPE and SCHLOCHOFF), A., i, 414.

Dimethylheptenol (RUPE and SCHLOCHOFF), A., i, 414.

3:6-Dimethylhexahydropyridazine and its hydrochloride (PAAL and KOCH), A., i, 92.

1:1-Dimethyl*cyclo*hexane (*dimethylhexahydrobenzene*), synthesis of, and 3-bromo-, 3-iodo-, and 3-hydroxy-, and its acyl derivatives, and 3:4-*di*bromo- (CROSSLEY and RENOUF), T., 1487 ; P., 209.

supposed identity of dihydrolaurolene and dihydroisolaurolene with (CROSSLEY and RENOUF), P., 303.

and 3-hydroxy-, densities, magnetic rotations, and refractive powers of (PERKIN), T., 1491.

Dimethyl*cyclo*hexanes, 1:2-, 1:3-, and 1:4- (SABATIER and MAILHE), A., i, 588.

Dimethyl*cyclo*hexanols, 1:2-, 1:3-, and 1:4-, synthesis of (SABATIER and MAILHE), A., i, 587.

2:6-Dimethyl-4-*cyclo*hexanol-1-carboxylic acids, isomeric, and their oxidation (MERLING, WELDE, and SKITA), A., i, 349.

1:1-Dimethyl-Δ^3-*cyclo*hexene (*1:1-dimethyl-Δ^3-tetrahydrobenzene*), synthesis of (CROSSLEY and RENOUF), T., 1487 ; P., 209.

density, magnetic rotation, and refractive power of (PERKIN), T., 1491.

Dimethyl*cyclo*hexenes, 1:2-, 1:3-, and 1:4- (SABATIER and MAILHE), A., i, 588.

2:6-Dimethyl-Δ^2-*cyclo*hexene-4-one-1-carboxylic acid, ethyl ester (MERLING, WELDE, and SKITA), A., i, 350.

1:5-Dimethyl*cyclo*hexenylidene-3-cyanoacetic acid, ethyl ester (KNOEVENAGEL and MOTTEK), A., i, 62.

βε-Dimethylhexylene βε-glycol, dimethyl ether of (ISTOMIN), A., i, 165.

2:3-Dimethylindole, action of chloroform on (PLANCHER and CARRASCO), A., i, 298.

4:7-Dimethylindole, synthesis of, and its **2-carboxylic acid** (PLANCHER and CARAVAGGI), A., i, 298.

5:5-Dimethylmalonylguanidine (MERCK), A., i, 751.

αα-Dimethyl-β-methylenebutyrolactone (NOYES), A., i, 322.

Dimethylmethylenetrimethylene. See β-Propylene*cyclo*propane.

1:4-Dimethyl-β-naphthol from a derivative of artemisin (BERTOLO), A., i, 224.

βζ-Dimethyl-octoic acid, β-hydroxy- and **-Δ$^{\alpha}$-octenoic acid**, ethyl esters (BOUVEAULT and BLANC), A., i, 12.

γη-Dimethyloctyl alcohol (BOUVEAULT and BLANC), A., i, 12.

βδ-Dimethylpentane (CHONIN), A., i, 729.

1:1-Dimethyl*cyclo*pentane (KIJNER), A., i, 772.

Dimethylpentane-βδ-diols, **ββ-** and **βδ-** (FRANKE and KOHN), A., i, 111.

Dimethylpentanonol. See γ-Keto-αββ-trimethylbutyl alcohol.

Dimethylpinylamine and its hydrochloride (TILDEN and STOKES), T., 838; P., 183.

1:4-Dimethylpiperazine (KNORR, HÖRLEIN, and ROTH), A., i, 834.

ββ-Dimethylpropane. See Tetramethylmethane.

ββ-Dimethylpropane-αγ-diol. See Dimethyltrimethylene glycol.

δδ-Dimethyl-α-*iso*propyl-fulgenic acid and **-fulgide** (STOBBE and LEUNER), A., i, 857.

3:6-Dimethylpyridazine and its additive salts (PAAL and KOCH), A., i, 91.

4:5-Dimethylpyridine, 2:6-*di*hydroxy-, and its hydrochloride and dibenzoyl and isonitroso-derivatives (ROGERSON and THORPE), T., 1696; P., 239.

3:4-Dimethylpyridine-5-carboxylic acid, 2:6-*di*hydroxy-, ethyl ester, and its hydrochloride (ROGERSON and THORPE), T., 1701; P., 239.

2:6-Dimethylpyridone, 3-*mono-* and 3:5-*di*-bromo- (FEIST and BAUM), A., i, 915.

5-Dimethylpyrimidine, 2:4-*di*imino-6-hydroxy- (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 671.

Dimethylpyrone and its compounds with acids, electrical conductivity of, in ethyl bromide (PLOTNIKOFF), A., ii, 433.

and its hydrochloride and compound with alcohol, molecular refractions of (HOMFRAY), T., 1443; P., 226.

compounds of, with trichloroacetic acid (PLOTNIKOFF), A., i, 77.

2:6-Dimethyl-4-pyrone, bromo-derivatives (FEIST and BAUM), A., i, 914.

Dimethylpyronedicarboxylic acid, ethyl ester, action of bromine on (PALAZZO), A., i, 458.

2:5-Dimethylpyrrole-3:4-dicarboxylic acid, 1-amino-, and its benzoyl derivatives (BÜLOW, RIESS, and SAUTERMEISTER), A., i, 661.

2:4-Dimethylquinoline, 3-chloro-, and its picrate (PLANCHER and CARRASCO), A., i, 298.

1:8-Dimethyl-2-quinolone, 5-nitro- (DECKER, GADOMSKA, SANDBERG, and STAVROLOPOULOS), A., i, 375.

6:8-Dimethylquinophthalone (EIBNER), A., i, 716.

Dimethylsparteine (MOUREU and VALEUR), A., i, 716.

Dimethylstilbenes, *o-*, *m-*, and *p-* (WISLICENUS and WREN), A., i, 284.

α:*p*-Dimethylstyrene, β-chloro- (AUWERS), A., i, 434.

Dimethylstyrylcarbinol (KOHLER and HERITAGE), A., i, 207.

Dimethyltetrahydroanthraquinone, *di*hydroxy-, and its diacetyl derivative (TSCHIRCH and CRISTOFOLETTI), A., ii, 852.

1:2-Dimethyl-Δ^{2}-tetrahydropyridine, action of formaldehyde on (LIPP and WIDNMANN), A., i, 610, 662.

5:6-Dimethyltetra-oxydiphenyltriazine, 3-hydroxy-, and its acetyl derivative and sodium salt (BILTZ and ARND), A., i, 675.

Dimethyltetrazoline and its reactions (RUHEMANN and MERRIMAN), T., 1779.

Dimethylthebainemethine methiodide (KNORR and PSCHORR), A., i, 814.

Dimethylthetine, *l*-menthyl ester, salts of, molecular rotations of (SMILES), T., 453; P., 93.

Dimethylthujone (HALLER), A., i, 602.

Dimethyl-*o-* and *-p*-toluidines, preparation of (CLARKE), A., i, 427.

4-*N*-Dimethyl-2:4-tolylenediamine, 5-bromo-, action of diazo-compounds on, and its acyl derivatives (MORGAN and CLAYTON), T., 946; P., 182.

Dimethyltrimethylene glycol, reduction of (MEYERSBERG), A., i, 166.

αα-Dimethylvalerolactone (BLANC), A., i, 680, 681.

ββ-Dimethylvalerolactone (BLANC), A., i, 681.

Dimethylxanthogenamide (BILLETER and RIVIER), A., i, 50.

2:4-Dimethylxanthone (ULLMANN and ZLOKASOFF), A., i, 598.

αα-Di-β-naphthacarbazole (2:2-*dinaphtha*-1:1-*imine*) (VESELÝ), A., i, 236.

ββ-Dinaphthacridine, triboluminescence of (MORGAN), A., ii, 786.
trimagnesium alkyl iodides (SENIER, AUSTIN, and CLARKE), T., 1473.

2:2-Dinaphtha-1:1-imine. See **αα-Di-β-naphthacarbazole.**

Dinaphthapyryl. See Dinaphthaxanthyl.

Dinaphthastilbenes, α- and β- (WISLICENUS and WREN), A., i, 284.

Dinaphthaxanthen (*dinaphthapyran*) (BETTI and MUNDICI), A., i, 213.

Dinaphthaxanthonium salts, condensation of, with amines (ROBYN), A., i, 608.
condensation of, with phenols (FOSSE and ROBYN), A., i, 607.

Dinaphthaxanthydrole hydrochloride and the action of methyl and ethyl alcohols on (BETTI and MUNDICI), A., i, 213.

Dinaphthaxanthyl (*dinaphthapyryl*), halogen double salts of metals with (FOSSE and LESAGE), A., i, 541, 917.

2-Dinaphthaxanthylbenzene, 1:5-*di*hydroxy-, and its diacetyl derivative (FOSSE and ROBYN), A., i, 607.

Dinaphthaxanthylphenols insoluble in aqueous alkali hydroxides (FOSSE and ROBYN), A., i, 607; (ROGOFF), A., i, 883.

ββ-Dinaphthol, oxidation of (BÜNZLY and DECKER), A., i, 884.

1:5-Di-β-naphthoxyanthraquinone (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 797.

2:2-Dinaphthyl, 1:1-*di*nitro- (VESELÝ), A., i, 236.

2:2′-Dinaphthylamine, 1:1′-*di*chloro- (SCHAPOSCHNIKOFF and GOLEFF), A., i, 644.

2:2′-Dinaphthylamine-5:5′- and **-6:6′-disulphonic acids** (BUCHERER and STOHMANN), A., i, 586.

9:10-Di-α-naphthylanthracene (GUYOT and STAEHLING), A., i, 886.

1:1′-Dinaphthyl-4-azo-benzene- and **-m-toluene** and **-4:4′-disazo-benzene, -p-nitrobenzene, -β-naphthalene**, and **-m-toluene**, 3:3′-*di*hydroxy- (POZZI-ESCOT), A., i, 102.

9:10-Di-α-naphthyldihydroanthracene, 9:10-*di*hydroxy-, and its chloro-derivatives (GUYOT and STAEHLING), A., i, 886.

2:2′-Dinaphthyl-1:1′-disazobenzene, 3:3′-*di*hydroxy- (POZZI-ESCOT), A., i, 101.

Dinaphthylene dioxide and its picrate and tetranitro-derivative (BÜNZLY and DECKER), A., i, 884.

Dinaphthylenediphenylene-ethane(?) and **-ethylene** (GRAEBE), A., i, 83.

Di-α-naphthylethylenediamine, di-α-bromopropionyl derivative, reactions of, with phenol and α- and β-naphthols (BISCHOFF and SCHTSCHEGOLEW), A., i, 85.

Di-β-naphthylethylenediamine, di-α-bromopropionyl derivative, reactions of, with phenol and α- and β-naphthols (BISCHOFF and SOLOWEITSCHIK), A., i, 86.

Di-α- and **-β-naphthylethylenediamines**, di-α-bromo-*n*- and *-iso*-butyryl derivatives, reactions of, with phenol and α- and β-naphthols (BISCHOFF), A., i, 86.
di-α-bromoisovaleryl derivatives, reactions of (BISCHOFF), A., i, 158.

Dinaphthyline, constitution of (VESELÝ), A., i, 237.

Dinormenthadiene, synthesis of (MATSUBARA and PERKIN), T., 668.

Di*cyclo*octadiene (WILLSTÄTTER and VERAGUTH), A., i, 515.

α-Dioximes, preparation of (LOCQUIN), A., i, 19.
complex compounds of (TSCHUGAEFF), A., i, 743.

Dioximines (TSCHUGAEFF), A., i, 743.

Dioximinobutyric acid, ethyl ester, non-existence of two stereoisomerides of, and its acetyl derivatives (BOUVEAULT and WAHL), A., i, 257, 612; (HANTZSCH), A., i, 408.

2:4-Dioxy-1:3-diethylpyrimidine, 5:6-*di*amino-, and its 5-*N*-formyl derivative, and 6-imino-, and its isonitroso-compound (SCARLAT), A., i, 160.

Dioxymethylene-. See Methylenedioxy-.

αγ-Dipalmitin and its α- and β-acetyl derivatives, synthesis of (GRÜN), A., i, 562.

Dipalmito-α-chlorohydrin, synthesis of (GRÜN), A., i, 562.

Diphenic acid, preparation of (MEYER and SPENGLER), A., i, 219.

Diphenic anhydride, condensation of, with toluene (PICK), A., i, 68.

Diphenolmethane, *tetra-*, *hexa-*, and *octa*bromo- (ZINCKE and BUFF), A., i, 881.

Dipheno-quinhydrone and **-quinone** and its di-imine (WILLSTÄTTER and KALB), A., i, 361.

9:10-Diphenoxy-9:10-*iso*amylenedihydroanthracene (JÜNGERMANN), A., i, 795.

1:5-Diphenoxyanthraquinone (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 797.

9:9-Diphenoxyfluorene (SMEDLEY), T., 1252; P., 221.

αε-Diphenoxypentane (v. Braun and Steindorff), A., i, 341.

9:10-Diphenoxy-9-phenyldihydroanthracene, 10-hydroxy-, and its acetyl derivative (Liebermann and Lindenbaum), A., i, 522.

Diphenyl, 4:4′-diamino-. See Benzidine.

5-*mono*- and 3:5-*di*-amino-2-hydroxy-, and *mono*-, *di*-, and *tri*-nitro-2-hydroxy-derivatives and their ethers (Hill and Hale), A., i, 200.

Diphenyl *di*sulphide, *di*-*o*-amino-, compound of, with hydroquinizarin and *di*-*o*-hydroxy-, and its reactions and compound with diazotised naphthionic acid (Friedländer and Mauthner), A., i, 103.

Diphenylacetamide (Japp and Knox), T., 681; P., 153.

Diphenylacetic anhydride (Staudinger), A., i, 444.

αγ-Diphenylacetonyldialuric acid (Kühling), A., i, 944.

ββ-Diphenylacrylic acid and its nitrile and α-cyano-derivative (Kohler and Reimer), A., i, 347.

Diphenylamine, action of, on nitric acid (Bay), A., i, 340.

action of sulphuric acid on (Kadiera), A., i, 934.

as reagent for nitrites, nitrates, and chlorates and its use when mixed with β-naphthol and resorcinol (Alvarez), A., ii, 352.

diazoamino-compound from (Vignon and Simonet), A., i, 397.

Diphenylamine, 4:4′-*di*amino- and 4:4′-*di*nitro-, acetyl and formyl derivatives of (Farbwerke vorm. Meister, Lucius, & Brüning), A., i, 191.

m-hydroxy-, azo-compounds from (Oehler), A., i, 161.

4-nitro-2-amino-, benziminazole and quinoxaline compounds from (Reissert and Goll), A., i, 247.

3:2′:4′-*tri*- and 3:5:2′:4′-*tetra*-nitro-4-hydroxy-, and their acetyl derivatives (Reverdin and Dresel), A., i, 430.

Diphenyl-*p*-aminotolylmethane and its sulphate and benzoyl derivative (Busch and Rinck), A., i, 520.

1:4-Diphenyl-3:5-*endo*anilodihydrotriazole and its salts (Busch), A., i, 307.

use of, in estimating nitrates (Busch), A., ii, 282, 418; (Gutbier), A., ii, 418.

αβ-Diphenyl-2:3-anthraquinoxalinequinone (Scholl and Kačer), A., i, 89.

9:9-Diphenyl-10-anthrone, 2:4′-*di*hydroxy-, and its diacetyl derivative (Liebermann and Lindenbaum), A., i, 522.

Diphenylbenzidine and its **dicarboxylic acid** and sulphone (Kadiera), A., i, 934.

Diphenyl-ψ-benzylthiosemicarbazide (Wheeler and Statiropoulos), A., i, 721.

Diphenylbisoxadiazole (Stollé and Münch), A., i, 95.

Diphenylbisthiodiazoles (Stollé and Kind), A., i, 96.

***ab*-Diphenyl-*c*-bornyliminoxanthide** (Tschugaeff), A., i, 74.

Diphenyl*cyclo*butadienedicarboxylic anhydride (Ruhemann and Merriman), T., 1394; P., 225.

αβ-Diphenylbutane, αδ-*di*nitro-β-cyano-, α- and β-forms of (Holleman), A., i, 42.

3:4-Diphenyl-6-*tert.*-butyl-1:2-diazine (Japp and Wood), T., 712.

αβ-Diphenylbutylene αβ-glycol (Acree), A., i, 217.

βγ-Diphenylbutyramide (Kohler and Reimer), A., i, 348.

βγ-Diphenylbutyrolactone, α-hydroxy-, and its isomeride (Erlenmeyer), A., i, 784.

Diphenylcarbinol. See Benzhydrol.

Diphenyl-2′-carboxylic acid, 2-cyano-, and *mono*- and *di*-nitro-2-cyano-, and their methyl esters (Werner and Piguet), A., i, 67.

2-hydroxy-, pentahydroxy-derivative of the lactone of, and its pentaacetyl and pentabenzoyl derivatives (Perkin and Nierenstein), T., 1425; P., 186.

Diphenylchrysofluorene, amino- (Ullmann and Mourawiew-Winigradoff), A., i, 642.

Diphenyldialkyl-1-alkyl- and -1-aryl-ψ-dithiobiurets (Billeter and Rivier), A., i, 50.

2:5-Diphenyl-1:4-diazine and its 3:4-dihydro-derivative (Japp and Knox), T., 702; P., 153.

***s*-Diphenyldicarbamido*di*iodo-*m*-phenylenediamine** (Morgan and Wootton), T., 939.

Diphenyldihydroacenaphthene, *di*hydroxy- (Acree), A., i, 216.

9:9-Diphenyldihydroanthracene and 10-bromo-, 10-hydroxy-, and 2′:4′-*di*hydroxy-, diacetyl derivative of (Liebermann and Lindenbaum), A., i, 522.

1:1-Diphenyl-1:2-dihydro*iso*benzofuran (Guyot and Catel), A., i, 517.

1:2-Diphenyl-1:2-dihydro*iso*benzofuran and 2-hydroxy- (GUYOT and CATEL), A., i, 540.

Diphenyldihydroquinoylmethane, *p*-amino-, *N*-benzoyl derivative of (THOMAE). A., i, 587.

3:6-Diphenyl-1:4-dihydrotetrazine and its benzylidene derivative (STOLLÉ), A., i, 249.

5:6-Diphenyl-2:3-dihydro-1:2:3:4-tetrazine and its reactions and 2-mono- and 2:3-di-benzoyl derivatives (STOLLÉ, MÜNCH, and KIND), A., i, 97.

Diphenyldihydrotetrazinedicarboxylic acid and its ethyl ester (BOWACK and LAPWORTH), T., 1867.

5:6-Diphenyldihydro-1:2:4-triazine, 3-hydroxy- (BILTZ), A., i, 491.

Diphenyl-2:5-dimethoxyphenylcarbinol (KAUFFMANN and GROMBACH), A., i, 281.

Diphenyl-2:5-dimethoxyphenylmethane and its isomeride and chloride (KAUFFMANN and GROMBACH), A., i, 773.

δδ-Diphenyl-αα-dimethyl-fulgenic acid and its acid ester and **-fulgide** (STOBBE and LENZNER), A., i, 857.

Diphenyldimethylthiopinacone (MANCHOT and KRISCHE), A., i, 142.

Diphenyl-4:4′-disulphonic acid, 2:2′-*di*nitro-, and its potassium salt (ULLMANN and FRENTZELL), A., i, 308.

s-**Diphenyldi-*p*-tolylpinacone**, action of acetyl chloride on (ACREE), A., i, 216.

Diphenylenedibenzoylmuconic acid (*βγ-diphenyleně-αδ-dibenzoylbutadiene-αδ-dicarboxylic acid*), ethyl ester, and its isomeride (JAPP and WOOD), T., 713.

Diphenylenedihydrofuran (MEYER and SPENGLER), A., i, 220, 362.

Diphenylene-ethylene and its dibromide (MANCHOT and KRISCHE), A., i, 143.

Diphenylenetartramide (JAPP and KNOX), T., 685.

Diphenylethane, action of nitric acid on (KONOWALOFF and JATZEWITSCH), A., i, 763.

p-amino-, and its sulphate and benzoyl derivative (BUSCH and RINCK), A., i, 519.

ββ-Diphenylethylamine, β-hydroxy-, and its salts (PAAL and WEIDENKAFF), A., i, 436.

s-**Di-β-phenylethylcarbamide**, *di-o*-hydroxy- (PSCHORR and EINBECK), A., i, 590.

Diphenylethylcarbinol, ethyl ether (KONOWALOFF and DOBROWOLSKY), A., i, 765.

Diphenylethylene, bromo-derivatives (STOERMER and SIMON), A., i, 53.

s-**Diphenylethylene**. See Stilbene.

Diphenylethylenediamine, di-α-bromo-*n*- and -*iso*-butyryl derivatives, reactions of, with phenol and α- and β-naphthols (BISCHOFF), A., i, 86.

di-α-monobromopropionyl derivative, reactions of, with the sodium derivatives of phenols, ethyl salicylate, and ethyl malonate (BISCHOFF), A., i, 84.

di-α-bromoisovaleryl derivative, reactions of (BISCHOFF), A., i, 157.

Diphenylethylguanidine and its hydrobromide (GUILLEMARD), A., i, 518.

βγ-Diphenylethylmalonamic acid (KOHLER and REIMER), A., i, 348.

β-Diphenylethyl-1-phenyl-ψ-dithiobiuret (BILLETER and RIVIER), A., i, 50.

1:4-Diphenyl-2-ethylurazole (WHEELER and STATIROPOULOS), A., i, 721.

Diphenylfluorene, hydroxy-, and ether (KLIEGL), A., i, 187.

4:5-Diphenylglyoxaline and 1-ethyl and 1:3-diethyl derivatives and their additive salts (PINNER), A., i, 476.

αε-Diphenyl-Δ$^{\alpha\gamma}$-heptadiene-ε-ol (BAUER), A., i, 278.

***iso*Diphenylhydroxyethylamines**, derivatives of racemic and optically active (ERLENMEYER and ARNOLD), A., i, 193.

4:5-Diphenyliminazolone and its diacetyl and dibenzoyl derivatives (BILTZ, ARND, and STELLBAUM), A., i, 674.

Diphenylketen and its anilide, amide, and phenylhydrazide (STAUDINGER), A., i, 444.

Diphenylmethane, *di*chloro-, formation of (BOESEKEN), A., i, 423.

Diphenylmethane-4:4′-dicarboxylic acid, *di*amino- and *di*nitro-, and their ethyl esters (DUVAL), A., i, 651.

αγ-Diphenyl-δ-*p*-methoxyphenyl-β-butanone, δ-chloro-, and **αγ-Diphenyl-δ-*p*-methoxyphenyl-Δγ-butylene-β-one** (HERTZKA), A., i, 291.

9:10-Diphenyl-2-methylanthracene (GUYOT and STAEHLING), A., i, 886.

γδ-Diphenyl-β-methyl-Δγ-butene-β-ol (KOHLER and HERITAGE), A., i, 209.

9:10-Diphenyl-2-methyldihydroanthracene and 9:10-*di*hydroxy-, and its dichloride and dimethyl and diethyl ethers (GUYOT and STAEHLING), A., i, 885.

αγ-Diphenyl-δ-*mp*-methylenedioxyphenyl-β-butanone, δ-chloro-, and **αγ-Diphenyl-δ-*mp*-methylenedioxyphenyl-Δγ-butene-β-one** (HERTZKA), A., i, 291.

αζ-Diphenyl-ε-methyl-Δ$^{\alpha\gamma\epsilon}$-hexatriene (BAUER), A., i, 278.

Diphenyl-α-methylindolidenemethane hydrochloride (FREUND and LEBACH), A., i, 666.

ββ-Diphenylmethylmalonamic acid (KOHLER and REIMER), A., i, 347.

Diphenylmethylmalonic acid and its salts, esters, and derivatives (KOHLER), A., i, 700.

Diphenylmethylolid, *penta*hydroxy-. See Diphenyl-2′-carboxylic acid, 2-hydroxy-, pentahydroxy-derivative of the lactone of.

Diphenylmethylsuccinic acid, synthesis of (EIJKMAN), A., i, 528.

Diphenyl-α- and **-β-naphthylcarbinols** (ULLMANN and MOURAWIEW-WINIGRADOFF), A., i, 642.

αβ-Diphenyl-β-1-naphthylpropionic acid and its methyl esters (KOHLER and HERITAGE), A., i, 208.

Diphenyloxazolone (MASELLI), A., i, 776.

1:2-Diphenyl-Δ^1-*cyclo*pentene-4-one. See Stilbeneacetone.

9:10-Diphenylphenanthrene (BILTZ), A., i, 188.

Diphenylphenanthrone and the action of alcoholic potassium hydroxide on (ACREE), A., i, 216.

Diphenylpropanes, **αα-**, **αβ-**, and **αγ-**, and their nitration (KONOWALOFF and DOBROWOLSKY), A., i, 763, 764.

ββ-Diphenylpropionic acid and its methyl ester and α-bromo-derivative (KOHLER and HERITAGE), A., i, 207; (KOHLER), A., i, 700.

α-bromo-α-cyano-, ethyl ester, and α-cyano-, and its ethyl ester, amide and nitrile (KOHLER and REIMER), A., i, 347.

ββ-Diphenylpropiophenone and α-bromo- (KOHLER and HERITAGE), A., i, 207; (KOHLER and JOHNSTIN), A., i, 215.

Di-γ-phenylpropyldicamphor, isomeric (RUPE and FRISELL), A., i, 221.

Diphenylpropylenecamphor, isomeric, and their bromine derivatives (RUPE and FRISELL), A., i, 221.

Diphenyl*iso*propylidene*cyclo*pentenone (JAPP and KNOX), T., 673.

Diphenylpyrazine. See 2:5-Diphenyl-1:4-diazine.

Diphenylpyrrole, amino- (ANGELICO), A., i, 938.

3-nitroso-, anhydro-trioxime from, and its benzoyl derivative (ANGELICO), A., i, 660.

Diphenylquinoylmethane, *p*-amino-, *N*-benzoyl derivative of (THOMAE), A., i, 587.

Diphenylsulphon-. See Dibenzenesulphon-.

Diphenylsulphone-*o*-carboxylic acid and its esters, salts, chloride, amide, and anhydride (WEEDON and DOUGHTY), A., i, 345.

and 5-amino-, *N*-acetyl derivative of, and 4′-chloro- (ULLMANN and LEHNER), A., i, 290.

Diphenylsulphoxide-*o*-carboxylic acid and its salts and nitro-derivative (WEEDON and DOUGHTY), A., i, 345.

***s*-Diphenylthiocarbamide.** See Thiocarbanilide.

Diphenylthioldibenzylacetone (RUHEMANN), T., 23.

Diphenyl-*m*-tolylcarbinol, boiling and melting points of (ACREE), A., i, 217.

Diphenyl-*o*-tolylpropionic acid and its methyl ester (KOHLER and HERITAGE), A., i, 208.

5:6-Diphenyl-1:2:4-triazine, 3-hydroxy- (BILTZ), A., i, 491.

1:3-Diphenyltriazole 5-disulphide (WHEELER and STATIROPOULOS), A., i, 722.

1:4-Diphenyl-1:2:3-triazole, 5-chloro-, and 5-hydroxy-, and its benzoyl derivative and methyl ether (DIMROTH and LETSCHE), A., i, 100.

3:4-Diphenyl-1:2:5-triazole and its silver derivative (STOLLÉ, MÜNCH, and KIND), A., i, 97.

Diphtheria bacillus. See Bacillus.

poison (ARRHENIUS and MADSEN), A., ii, 50.

Diphtheritic toxins. See Toxins.

Diphthalylethane. See Ethinediphthalide.

Diphthalylic acid (GRAEBE), A., i, 704.

3:6-*di-* and *tetra*-chloro- (GRAEBE and PETER), A., i, 705.

Dipiperonylhydracryl ketone, *di-o*-nitro- (HERZ), A., i, 779.

Dipiperonylideneacetone monopicrate (VORLÄNDER and SIEBERT), A., i, 793.

Dipiperylhydrazine and its picrate (ANGELI and CASTELLANA), A., i, 491.

Dipropylacetylcarbamide (FISCHER and DILTHEY), A., i, 37.

5:5-Dipropylbarbituric acid and 4-imino- (CONRAD), A., i, 752.

Dipropylconinium iodides, isomeric (SCHOLTZ), A., i, 297.

Dipropylcyanoacetic acid. See α-Propylvaleric acid, α-cyano-.

4:5-Di*iso*propyldiphenylimin*a*zolone (BILTZ and STELLBAUM), A., i, 674.

5:6-Di*iso*propyldiphenyltriazine, 3-hydroxy-, and its acetyl derivative (BILTZ and STELLBAUM), A., i, 675.

Dipropylmalonamic acid, ethyl ester (CONRAD and ZART), A., i, 755.
Dipropylmalonamide (CONRAD and ZART), A., i, 754.
Dipropylmalonuramide (CONRAD and ZART), A., i, 754.
Dipropylmalonylcarbamide. See 5:5-Dipropylbarbituric acid.
5:5-Dipropylmalonylguanidine (FISCHER and DILTHEY), A., i, 37; (MERCK), A., i, 751.
5-Dipropylpyrimidine, 4:6-*di*imino-2-thio- (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 671.
Dipropylstilbeneacetone (v. LIPPMANN and FRITSCH), A., i, 443.
Dipterocarpus, fat of the fruits of the (KLIMONT), A., ii, 126.
8:8′-Diquinolyl and its salts (v. NIEMENTOWSKI and SEIFERT), A., i, 300.
Disazo-dyes from 6-amino-α-naphthol-3:7-disulphonic acid (OEHLER), A., i, 845.
from 6-amino-α-naphthol-3-sulphonic acid (OEHLER), A., i, 162.
Disease, composition of blood and exudations in (v. RZENTKOWSKI), A., ii, 337.
Dissociation and **Dissociation constant.** See under Affinity.
αγ-Distearin, synthesis of (GRÜN), A., i, 562.
Distribution. See under Affinity.
Distyrylethyleneacetone (v. LIPPMANN and FRITSCH), A., i, 443.
Disulphide-acetic and **-propionic acids** (BIILMANN), A., i, 626.
Disulpho-acids, preparation of (BIILMANN), A., i, 625.
Dithymolylamine ethers and their salts (DECKER and SOLONINA), A., i, 197.
4:9-Di-*p*-toluidinoanthraquinone, 2:4-*di*bromo-1:6-*di*amino- (SCHOLL and KRIEGER), A., i, 146.
Di-*o*-toluoylbenzene (BAUER), A., i, 210.
Ditolyls, 2:2′- and 4:4′-, dinitro-derivatives of (ULLMANN and FRENTZELL), A., i, 308.
Di-*p*-tolyldihydrotetrazinedicarboxylic acid, ethyl ester (BOWACK and LAPWORTH), T., 1869.
***as*-Di-*p*-tolylethane**, constitution of (LAVAUX), A., i, 698.
***as*-Di-*p*-tolylethylene** (BISTRZYCKI and REINTKE), A., i, 285.
Di-*o*- and **-*p*-tolylethylenediamines**, di-α-bromo-*n*- and *-iso*-butyryl derivatives, reactions of, with phenol and α- and β-naphthols (BISCHOFF), A., i, 86.
Di-*o*- and **-*p*-tolylethylenediamines**, di-α-propionyl derivative, reactions of, with the sodium derivatives of phenol and α- and β-naphthols (BISCHOFF, MATZ, and v. WODZINSKY), A., i, 85.
di-α-bromoisovaleryl derivatives, reactions of (BISCHOFF), A., i, 158.
Di-*p*-tolyl ketone and its phenylhydrazone (BISTRZYCKI and REINTKE), A., i, 285.
Ditolylmethanes, *o*-, *m*-, and *p*-, *di*chloro- (BOESEKEN), A., i, 424.
1:5-Di-*o*- and **-*p*-tolyloxyanthraquinones** (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 797.
9:10-Di-*o*-tolyloxy-9-phenyldihydroanthracene, 10-hydroxy- (LIEBERMANN and LINDENBAUM), A., i, 522.
αα-Ditolylpropionic acid (BISTRZYCKI and REINTKE), A., i, 285.
Ditrimethylparaconylmalonic acid, ethyl ester (NOYES), A., i, 322.
Diuresis, studies in (BIBERFELD), A., ii, 48.
caffeine, mechanism of (LOEWI, FLETCHER, and HENDERSON), A., ii, 739.
salt, mechanism of (LOEWI and ALCOCK), A., ii, 739.
urea, mechanism of (HENDERSON and LOEWI), A., ii, 739.
Divers' sickness, oxygen inhalation as a means of preventing (HAM and HILL), A., ii, 728.
***as*-Di-*o*-xylylethylene** (BISTRZYCKI and REINTKE), A., i, 285.
αα-Di-*o*- and **-*m*-xylylpropionic acids** (BISTRZYCKI and REINTKE), A., i, 285.
Djamboe. See *Psidium Guajava.*
Dodecane-ζη-diols, α- and β-, **ζ-Dodecanol** and its pyruvate and its semicarbazone, and **ζ-Dodecanone** and its semicarbazone (BOUVEAULT and LOCQUIN), A., i, 573.
Dog and sturgeon, nitrogen distribution in the livers of (WAKEMAN), A., ii, 467.
fat, distribution of fat, and the total fat in a (MOECKEL), A., ii, 467.
Dogs, chemistry of digestion in (LONDON and SULIMA), A., ii, 838.
digestion in, with artificial anus (MAETZKE), A., ii, 837.
Eck's fistula in (HAWK), A., ii, 183.
with Eck's fistula, poisonous symptoms in (ROTHBERGER and WINTERBERG), A., ii, 408.
and cats, absorption and excretion of iron in (SATTLER), A., ii, 333.

Dog's organism, behaviour of peptides in the (ABDERHALDEN and RONA; ABDERHALDEN and SAMUELY), A., ii, 839.
Dognácskaite, analysis of (OTTO), A., ii, 464.
Dolomite, reactions for distinguishing calcite and (THUGUTT), A., ii, 421.
Dressings, surgical, new, analysis of, quantitatively (FRESENIUS and GRÜNHUT), A., ii, 211.
Dropping point, the true, and an apparatus for determining it (UBBELOHDE), A., ii, 658.
Drugs, effect of chemical composition on the taste of certain (STERNBERG), A., ii, 409.
examination of, for arsenic (NAYLOR and CHAPPEL), A., ii, 117.
Drying apparatus (BEEBE and BUXTON), A., ii, 514.
for use in a current of carbon dioxide (VOIGT), A., ii, 551.
Dumostierite from San Diego Co., California and from Skamania Co., Washington (SCHALLER), A., ii, 262.
Dye producers, silk and wool as (PAULY and BINZ), A., i, 75.
Dyeing, theory of (ZACHARIAS), A., i, 74, 293; (BILTZ), A., i, 224; (BILTZ and UTESCHER), A., ii, 807; (BILTZ and BEHRE), A., ii, 808.
a phase of coagulation (LINDER and PICTON), T., 1931; P., 241.
influence of active groups in the textile fibres on the process of (SUIDA), A., i, 457.
Dyeing animal textile fibres, process of (GELMO and SUIDA), A., i, 714.
Dyeing power with mordants and colour and constitution of the hydroxyanthraquinones and their sulphonic acids, connection between (v. GEORGIEVICS), A., i, 447.
Dyes. See Colouring matters.
α-iso-**Dypnopinacolene** and its bromo- and nitro-derivatives and *α-iso*-**Dypnopinacolin**, dehydration of (TERLINCK), A., i, 129.
Dyscrasia, acid (DESGREZ and ADLER), A., ii, 102; (DESGREZ and GUENDE), A., ii, 406.
Dysentery, epidemic or bacillary (FIRTH), A., ii, 50.

E.

Earthnut, new alkaloid in (MOOSER), A., i, 79.
Earths, rare (FEIT and PRZIBYLLA), A., ii, 250; (FEIT), A., ii, 251.
Earths, rare, bibliography of the (MEYER), A., ii, 249.
preparation of anhydrous chlorides of the metals of the (MATIGNON), A., ii, 391, 458, 525.
See also Monazite earths.
Earths, rare, minerals from Llano Co., Texas (HIDDEN), A., ii, 535.
Echinoderm eggs. See Eggs.
Eder's solution. See Oxalic acid, mercuric salt.
Edestin, solubility of, in salt solutions (OSBORNE and HARRIS), A., i, 846.
of cotton seeds, action of pancreatic juice on (ABDERHALDEN and REINBOLD), A., ii, 838.
amino-acids from, and its behaviour with gastric juice (ABDERHALDEN and ROSTOSKI), A., i, 619.
of sunflower seeds, amino-acids from the, and its behaviour with gastric juice (ABDERHALDEN and REINBOLD), A., i, 620.
Egg-albumin, equilibrium in the system, ammonium sulphate, water, and (GALEOTTI), A., ii, 512.
oxidation of, with calcium permanganate (SEEMANN), A., i, 619.
Egg yolks, preparation of lecithin from (ROAF and EDIE), A., ii, 364.
Eggs, Echinoderm, action of alcohols on (FÜHNER), A., ii, 49.
fishes', chemistry of (HAMMARSTEN), A., ii, 727.
Fundulus, permeability of the membrane of (BROWN), A., ii, 727.
action of salts on (LOEB), A., ii, 400.
hens', localisation of enzymes in (WOHLGEMUTH), A., ii, 541.
Ektogan, analysis of, quantitatively (FRESENIUS and GRÜNHUT), A., ii, 211.
Elæomargaric acid and its oxidation products (KITT), A., i, 10.
Elaidic acids, *stereo-* and *oleo-* (GAWALOWSKI), A., i, 318.
Elder. See *Sambucus nigra*.
ELECTROCHEMISTRY:—
Electrification produced by radium rays (RIGHI), A., ii, 792.
contact, and colloidal solutions (PERRIN), A., ii, 138.
Cells, generator carbon- and gas- (HABER and MOSER), A., ii, 667.
concentration, in liquid ammonia (CADY), A., ii, 569.
Castner electrolytic, description of a laboratory model of the (LE BLANC and CANTONI), A., ii, 696.
galvanic, produced by the action of light (WILDERMAN), A., ii, 499.

ELECTROCHEMISTRY :—
Cells, hydrogen-oxygen, potential of (BRISLEE), A., ii, 133.
mercurous chloride, silver, potential difference of (BRÖNSTED), A., ii, 133.
valve (HOLTZ), A., ii, 670.
Electrical conductivity and viscosity, relation between (JONES and CARROLL), A., ii, 73 ; (PISSARJEWSKY and LEMCKE), A., ii, 684.
temperature coefficients of, in aqueous solutions (JONES and WEST), A., ii, 794.
of colloidal solutions (MALFITANO), A., ii, 72 ; (DUCLAUX), A., ii, 432, 511.
of electrolytes. See Electrolytes.
of metallic oxides and sulphides occurring naturally (KOENIGSBERGER and REICHENHEIM), A., ii, 624.
of phosphorus emanation and of freshly prepared gases (BLOCH), A., ii, 72.
of some salt solutions in acetamide (WALKER and JOHNSON), T., 1597 ; P., 233.
of solutions in ethyl bromide (PLOTNIKOFF), A., ii, 433.
clinical measurement of (WILSON), A., ii, 263.
Currents, alternating, use of, in chemistry, and the theory of the reactions which they determine (BERTHELOT), A., ii, 7.
alternating, electrolysis by (BROCHET and PETIT), A., ii, 7, 27, 28, 227, 672, 673 ; (LE BLANC ; ROSSI), A., ii, 137 ; (RUER), A., ii, 137, 795 ; (WILSON), A., ii, 673.
residual, theory of (NERNST and MERRIAM), A., ii, 674.
Dielectric constants, application of the Wehnelt interrupter in the measurement of, by Nernst's method (KRÜGER), A., ii, 432.
of phenols and their ethers dissolved in benzene and *m*-xylene (PHILIP and HAYNES), T., 998 ; P., 200.
Dielectrics, liquid (DE VILLEMONTÉE), A., ii, 624.
Arc lamp, mercury, with quartz jacket suitable for chemical purposes (FISCHER), A., ii, 568.
in vessels of fused silica (HAAGN), A., ii, 798.
Discharge, disruptive, in gases at high pressures (C. E. and H. GUYE), A., ii, 668.

ELECTROCHEMISTRY :—
Discharge, silent electric, syntheses by means of the (COLLIE), T., 1540 ; P., 201.
glow, in gases in reference to Faraday's law (SKINNER), A., ii, 797.
in vapours of the mercuric haloids (MATTHIES), A., ii, 669.
Electrical examination of the equilibria, $HIO_3+5HI \rightleftarrows 3I_2+3H_2O$ and $HBrO_3+5HBr \rightleftarrows 3Br_2+3H_2O$ (LUTHER and SAMMET), A., ii, 508.
Electrical furnace, new type of (HARKER), A., ii, 798.
Electrical furnaces for laboratory use (BLOUNT), A., ii, 238.
Electrical method for the combustion of organic compounds (MORSE and TAYLOR), A., ii, 480.
Electrical radiography (GABRITSCHEWSKI), A., ii, 218.
Electric water bath (BEEBE and BUXTON), A., ii, 514.
Electroaffinity of anions (SCHÄFER), A., ii, 499.
Electroaffinity differences between valency stages and their oxidation equilibria (SPENCER and ABEGG), A., ii, 369.
Electrocapillary phenomena, theory of (BILLITZER), A., ii, 225.
Electrochemical equivalent, effect caused by heating the cathode of the silver voltameter to redness on the value of the (VAN DIJK), A., ii, 635.
Electrostenolysis and Faraday's law (RICHARDS and LACY), A., ii, 299.
Electrical resistance, diminution of, produced in bad conductors by radium rays (RIGHI), A., ii, 793.
of metals, action of radium bromide on the (SABAT), A., ii, 219.
Electrodes, temperature of, and electrolytic changes, connection between (MOLDENHAUER), A., ii, 500.
balanced, use of (GEE), A., ii, 670.
metallic, action of potassium cyanide on (BROCHET and PETIT), A., ii, 27, 261.
very unequal (HOLTZ), A., ii, 670.
Anions, electroaffinity of (SCHÄFER), A., ii, 499.
Cations, bivalent, the so-called antitoxic action of (OSBORNE), A., ii, 746.
Anodes, aluminium, transition resistance and polarisation at (FISCHER), A., ii, 6.

ELECTROCHEMISTRY :—
Anodes of iridium, platinum, and rhodium, behaviour of, in the electrolysis of sulphuric acid (WESTHAVER), A., ii, 226.
magnesium, behaviour of (BABOROVSKÝ), A., ii, 671.
rotating, use of, in electro-analysis. See Analysis, electrolytic.
Anodic decomposition during the electrolysis of certain thallium, bismuth, and silver salts (BOSE), A., ii, 299.
potential in the electrolysis of neutral solutions of potassium bromide (BOERICKE), A., ii, 222.
P.D.-current curve for hydrochloric acid at platinum electrodes (LUTHER and BRISLEE), A., ii, 135.
Cathode luminescence of crystals (POCHETTINO), A., ii, 430.
potential, relation between, and electrolytic reducing action (TAFEL and NAUMANN), A., ii, 224.
cause of the spontaneous depression of, in the electrolysis of dilute sulphuric acid (TAFEL), A., ii, 223; (TAFEL and EMMERT), A., ii, 569.
potentials necessary for the electrolytic deposition of certain metals from solutions of their sulphates (COFFETTI and FOERSTER), A., ii, 796.
Electrolysis, determination of changes of concentration at the cathode during (SAND), A., ii, 134.
by alternating currents (BROCHET and PETIT), A., ii, 7, 27, 28, 227, 672, 673; (LE BLANC; ROSSI), A., ii, 137; (RUER), A., ii, 137, 795; (WILSON), A., ii, 673.
of organic acids by means of an alternating current (BROCHET and PETIT), A., ii, 227.
in acetone and in pyridine (LEVI and VOGHERA), A., i, 572.
Electrolyte, diffusion of one, in presence of another with a common ion (GRASSI), A., ii, 8.
Electrolytes, application of the hydrate theory of solutions to (LOWRY), A., ii, 686.
molecular heats of good and bad (MULLER and FUCHS), A., ii, 504.
conductivities of, in various solvents and in mixtures of these solvents (JONES and CARROLL), A., ii, 73.

ELECTROCHEMISTRY :—
Electrolytes, ionic sizes in relation to the conductivity of (BOUSFIELD), A., ii, 369.
dissociation of (LIEBENOFF), A., ii, 499.
equilibrium between proteids and (GALEOTTI), A., ii, 512.
diffusion of, in water (ÖHOLM), A., ii, 147.
amphoteric, theory of (WALKER), A., ii, 138.
influence of, on amylolytic action (FORD and GUTHRIE), P., 296.
binary, limiting conductivity of, in acetone (DUTOIT and LEVIER), A., ii, 625.
ternary, dissociation of (KÜMMEL), A., ii, 226, 502; (DRUCKER), A., ii, 371.
Electrolytic changes, connection between, and the temperature of the electrodes (MOLDENHAUER), A., ii, 500.
Electrolytic dissociation, recent investigations bearing on the theory of (KAHLENBERG), A., ii, 139.
relation of, to refractive power (ZOPPELLARI), A., ii, 493; (ZECCHINI), A., ii, 661.
Electrolytic deposition of metals (KOLLOCK and SMITH), A., ii, 859.
from rapidly moving electrolytes, theory of the (AMBERG), A., ii, 7.
Electrolytic preparation of nitrites from nitrates, especially at silver cathodes (MÜLLER and SPITZER), A., ii, 703.
Electrolytic solution tensions of substances in any solvent, foundations of a general theory of the (FREDENHAGEN), A., ii, 686.
Electromagnetic fields, influence of very strong, on the spark spectra of palladium, ruthenium, and rhodium (PURVIS), P., 241.
Electromotive behaviour of dilute amalgams (SPENCER), A., ii, 795.
Electromotive force between metals and solutions of their salts in water and methyl alcohol (CARRARA and D'AGOSTINI), A., ii, 370.
Ionisation and the magnetisation-coefficient of aqueous solutions (MESLIN), A., ii, 433.
due to radium emanation (DUANE), A., ii, 219.
produced between parallel plates by radium emanation (DUANE), A., ii, 297.

ELECTROCHEMISTRY:—
Ionic action in physiological processes, further proof of (NEILSON and BROWN), A., ii, 45.
Ionic velocities (TIJMSTRA), A., ii, 499.
Ions, new class of (MOREAU), A., ii, 9.
and cardiac rhythm (BENEDICT), A., ii, 330.
genesis of, by the motion of positive ions, and a theory of the sparking potential (TOWNSEND and HURST), A., ii, 7.
migration of, in methyl alcohol as solvent (DEMPWOLFF), A., ii, 9.
gaseous, size of, and the rate of recombination (THOMSON), A., ii, 797.
Polarisation observed during the cathodic liberation of hydrogen (TAFEL), A., ii, 223.
Potentials, measurement of, in iodine vapour (MATTHIES), A., ii, 793.
diffusion, elimination of, between two dilute aqueous solutions by the insertion of a concentrated solution of potassium chloride (BJERRUM), A., ii, 793.
electrode, measurement of, in stationary liquids (SAND), A., ii, 134.
electrolytic, of chromous salts (MAZZUCCHELLI), A., ii, 570.
mean, at electrodes under the action of alternating currents (GUNDRY), A., ii, 668.
metallic, chemical transfer of, and the chemical solution pressure of metals (FISCHER), A., ii, 501; (LUTHER), A., ii, 668.
sparking, theory of the (TOWNSEND and HURST), A., ii, 7.
Transport numbers in hydrogen bromide solution (STEELE), A., ii, 222.
Voltameter, new iodine (KREIDER), A., ii, 569.
Element, causes why an, often passes from one grade of combination to another without giving rise to intermediate compounds (MARTIN), A., ii, 809.
radioactive, new, in thorianite (HAHN), A., ii, 432.
Elements, refractive indices of the (CUTHBERTSON), A., ii, 129, 293.
solid, atomic heat of (LAEMMEL), A., ii, 300.
Ellagic acid and its compounds with aniline, quinoline, and phenylhydrazine, and its methyl ethers (GOLDSCHMIEDT), A., i, 900.
and its constitution and tetra-acetyl derivative (PERKIN and NIERENSTEIN), T., 1413; P., 185.
Emanations, limits of sensitiveness of (BERTHELOT), A., ii, 20.
contained in liquids, measurements of the (SCHMIDT), A., ii, 788.
See also Radioactivity under Photochemistry.
Emanium (GIESEL), A., ii, 220.
Giesel's, determination of wave-lengths in the spectrum of (HARTMANN), A., ii, 666.
and actinium (MARCKWALD), A., ii, 497.
the degradation constant of the emanations from (HAHN and SACKUR), A., ii, 432.
Emmonsite (?) from Colorado (HILLEBRAND), A., ii, 97, 723.
Emodin and its isomeride from cascara bark (JOWETT), A., ii, 192.
*iso***Emodin** from the rhizomes of Rheums cultivated in Berne (TSCHIRCH and EIJKEN), A., ii, 605.
Energy, free, and heat capacity (TREVOR), A., ii, 372; (BELL), A., ii, 434.
Enterokinase, relation of, to trypsin (BAYLISS and STARLING), A., ii, 273.
Enzyme, alcoholic, of yeast juice (HARDEN and YOUNG), A., ii, 109; (HARDEN), A., ii, 275.
amylolytic, in urine (CLARK), A., ii, 540.
cheese, biology of the (JENSEN), A., ii, 114.
fat-hydrolysing, from the mucous membrane of the stomach (FROMME), A., ii, 731.
hydrolytic, from the seeds of *Hydnocarpus Wightiana* and *H. anthelminthicus* (POWER and BARROWCLIFF), T., 892.
pancreas, behaviour of various polypeptides towards the (FISCHER and ABDERHALDEN), A., ii, 333.
proteolytic, of ripening seeds (ZALESKI), A., ii, 549.
splenic, proteolytic products of the, acting in an alkaline medium (CATHCART), A., ii, 404.
Enzyme action. See under Affinity.
Enzymes, action of (HENRI), A., ii, 237.
action of the radiations from radium bromide on some (DIXON and WIGHAM), A., ii, 548.
behaviour of, towards colloidal solutions (REISS), A., i, 956.
absorption, of, by colloids (DAUWE), A., i, 623.
catalysis by (v. EULER), A., ii, 693.
formation of acids by (HINKINS), A., ii, 183.

Enzymes which produce lactic acid (KAYSER), A., ii, 750.
which decompose nuclein compounds (SCHITTENHELM), A., i, 108; (SCHENCK), A., ii, 266.
localisation of, in the hen's egg (WOHLGEMUTH), A., ii, 541.
and anti-enzymes of exudates (OPIE), A., ii, 845.
digestive, specificity of certain (KIESEL), A., ii, 540.
are preteolytic and rennetic, identical? (BANG), A., ii, 100.

Enzymes. See also :—
Adenase.
Amylase.
Amylopectinase.
Catalase.
Chymosin.
Diastase.
Enterokinase.
Erepsin.
Fibrin ferment.
Géase.
Glutinase.
Guanase.
Gynocardase.
Hæmase.
Invertin.
Lactase.
Lactolase.
Lienoprotease.
Lipase.
Maltase.
Malt oxydase.
Myrosin.
Nuclease.
Oxydases.
Pancreas-steapsin.
Parachymosin.
Pastorase.
Pepsin.
Philocatalase.
Rennin.
Steapsin.
Trehalase.
Trypsin.
Tyrosinase.
Uricolase (*uricolytic ferment*).
Zymase.

Eosin, products obtained by the autoxidation of (HEFFTER), A., i, 897.

Ephedrine, synthesis of (SCHMIDT and FLAECHER), A., i, 370.

Ephedrines, synthetic (FOURNEAU), A., i, 57.

Epibromohydrin, action of hydrogen cyanide on (LESPIEAU), A., i, 406.

Epichlorohydrin, action of hydrogen cyanide on (LESPIEAU), A., i, 406.

Epidote from Inverness-shire (THOMAS), A., ii, 537.

Epiethylin, action of hydrogen cyanide on (LESPIEAU), A., i, 255, 406.

Epinephrine (*adrenaline*, *suprarenine*) (BERTRAND), A., i, 106; (WEYRICH), A., i, 152; (ALDRICH), A., i, 955.
methylation and oxidation of (STOLZ), A., i, 106.
action of (ELLIOTT), A., ii, 545.
action of, on cerebral vessels (WIGGERS), A., ii, 846.
effect of, on the excretion of sugar and nitrogen in birds (NOËL PATON), A., ii, 106.
synthesis of substances allied to (BARGER and JOWETT), T., 967; P., 205; (DAKIN), P., 154.
physiological action of synthetical substances allied to (DAKIN), A., ii, 410; (LOEWI and MEYER), A., ii, 846.

Equation, recent, of Van der Waals, verification of (VAN LAAR), A., ii, 148.

Equation of condition for gases (GOEBEL), A., ii, 149.

EQUILIBRIUM :—
Phase changes, influence of, on the tenacity of ductile metals at the ordinary temperature and at the boiling point of liquid air (G. T. and H. N. BEILBY), A., ii, 803.
Phase rule (WEGSCHEIDER), A., ii, 508.
Equilibria in the systems, $TlNO_3$—KNO_3, $TlNO_3$—$AgNO_3$, and $TlNO_3$—$NaNO_3$ (VAN EIJK), A., ii, 444.
dineric (BELL), A., ii, 684.
ternary (SCHREINEMAKERS), A., ii, 804.
Equilibrium, indifferent points (SAUREL), A., ii, 683.
fundamental functions of one-component ideal-constituent gases (BELL and TREVOR), A., ii, 374.
exact expression for the course of the spinodal curves and of their plait points for all temperatures, in the case of normal substances (VAN LAAR), A., ii, 507.
shape of the plait point curve for mixtures of normal substances (VAN LAAR), A., ii, 507.
phenomena observed when the plait curve meets the solubility curve (SMITS), A., ii, 684.
shape of the sections of the surface of saturation normal to the x-axis in case of a three-phase pressure between two temperatures (VAN DER WAALS), A., ii, 683.

EQUILIBRIUM :—
Equilibrium, the (T, x), of solid and fluid phases for variable values of the pressure (VAN DER WAALS), A., ii, 683.
contribution to the knowledge of the px- and pT-lines for the case that two substances enter into a combination which is dissociated in the liquid and the gas phase (SMITS), A., ii, 683.
hidden, in the px-diagram of a binary system in consequence of the appearance of solid substances (SMITS), A., ii, 683.
mixed crystals in systems of three substances (SCHREINEMAKERS), A., ii, 154, 376, 685.
between proteids and electrolytes (GALEOTTI), A., ii, 512.
between solid and liquid phases in ternary systems which are pseudo-binary; explanation of anomalous fusion and solution phenomena (ROOZEBOOM and ATEN), A., ii, 804.
Equilibrium, chemical. See under Affinity.
Erepsin, universal presence of, in animal tissues (VERNON), A., ii, 100.
in tissues as a measure of functional capacity (VERNON), A., ii, 841.
Ergosterol (ZELLNER), A., ii, 550.
Erythema, determining the plasma conditions in the blood in (ERBEN), A., ii, 741.
Erythrene, constitution of (PERKIN and SIMONSEN), T., 857.
Erythrin (*erythric acid*) (HESSE), A., i, 140.
Erythritolphosphoric acid, alkaloidal salts (CARRÉ), A., i, 815.
Erythrolactone, synthesis of (LESPIEAU), A., i, 566.
Erythroxyanthraquinone phenyl ether. See 1-Phenoxyanthraquinone.
Eserine (*physostigmine*) physiological action of (HEUBNER), A., ii, 847.
Esterification by means of methyl sulphate (GRAEBE), A., i, 678.
by means of sulphuric acid (MEYER), A., i, 137.
Esterification constants of substituted acrylic acids (SUDBOROUGH and ROBERTS), T., 1840; P., 86.
Esterification experiments (BOGOJAWLENSKY and NARBUTT), A., i, 854.
Esters, new method of preparing (TAYLOR), A., i, 852.
modification of Markownikoff's method of preparation of (WADE), T., 1656; P., 240.
Esters, new synthesis of, with magnesium organic compounds (TSCHITSCHIBABIN), A., i, 283.
heats of combustion and formation of (THOMSEN), A., ii, 573.
influence of water and alcohols on the boiling point of (WADE), T., 1656; P., 240.
cryoscopy of, in phenol solution (ROBERTSON), T., 1574; P., 231.
hydrolysis of, in heterogeneous systems (KREMANN), A., ii, 307, 688; (GOLDSCHMIDT), A., ii, 578.
fatty, action of sodium on (BOUVEAULT and LOCQUIN), A., i, 560, 572.
unsaturated, direct fixation of organomagnesium derivatives on the ethylenic linking of (BLAISE and COURTOT), A., i, 257.
Estragole, distribution of among the different organs of an annual plant (CHARABOT and LALOUE), A., ii, 549.
Estragole oxide (FOURNEAU and TIFFENEAU), A., i, 591.
Ethane, *hexa*chloro-, preparation of (HOFMANN and SEILER), A., i, 730.
Ethanedicarboxylic acids. See Methylmalonic acid and Succinic acid.
Ethane-$\alpha\alpha$-disulphonic acid, barium salt (SCHROETER and HERZBERG), A., i, 851.
Ethanemercarbide, decompositions of, with alkali sulphites and sulphur chloride (HOFMANN and FEIGEL), A., i, 867.
Ethanoldiacetonealkamine and its methyl derivative and their platinichlorides (KOHN), A., i, 929.
β-NH-Ethenyldiaminonaphthalene (MELDOLA and LANE), P., 24.
Ether. See Ethyl ether.
Ethers, synthesis of (HAMONET), A., i, 403.
mechanism of the formation of, from alkyl haloid (or halogen dinitrobenzene) and sodium alkyloxide (DE BRUYN and TIJMSTRA), A., ii, 150.
heats of combustion and formation of (THOMSEN), A., ii, 572.
Ethinediphthalide, *di*bromo-, dianil, di-*o*- and -*p*-tolils and bisphenylhydrazone of (REISSERT and ENGEL), A., i, 899.
Ethoxide, ferric (NICOLARDOT), A., i, 316.
sodium, estimation of, with menthone (TUBANDT), A., ii, 424.
Ethoxyacetaldehyde and its condensation product with formaldehyde (KLÜGER), A., i, 683.

9-Ethoxy-9-*iso*amyl-10-anthrone (JÜNGERMANN), A., i, 795.
5-Ethoxyaniline, 2:4:6-*tri*bromo-3-nitro- and 3-nitro- (BLANKSMA), A., i, 431.
α-Ethoxybenzylideneacetophenone (SLUITER), A., i, 796.
Ethoxybenzylmalonic acid, ethyl ester, action of, on ethyl sodiomalonate (STAUDINGER), A., i, 736.
γ-Ethoxybutyric acid, β-chloro-, and its amide, and β-hydroxy-, and its ethyl ester (LESPIEAU), A., i, 256.
β-Ethoxy-αα-*di*chloropropylene (VITORIA), A., i, 110.
β-Ethoxycrotonic acid, ethyl ester, and its reduction (BOUVEAULT and BLANC), A., i, 12.
γ-Ethoxycrotonic acid and its ethyl ester and nitrile (LESPIEAU), A., i, 319, 406.
α-Ethoxydihydro*iso*safrole, bromo-derivatives (HOERING), A., i, 903.
α-Ethoxy-αγ-diphenylbutane, βδ-*di*nitro- (MEISENHEIMER and HEIM), A., i, 269.
3-Ethoxydiphenyldiazonium salts, 4'-hydroxy- (CAIN), T., 7.
10-Ethoxy-9:9-diphenyldihydroanthracene (LIEBERMANN and LINDENBAUM), A., i, 523.
β-Ethoxy-ββ-diphenylethane, α-amino- and α-nitro- (KONOWALOFF and JATZEWITSCH), A., i, 764.
δ-Ethoxy-αγ-diphenyl-δ-*p*-methoxyphenyl- and -δ-*mp*-methylenedioxyphenyl-β-butanones (HERTZKA), A., i, 291.
α-Ethoxy-αα-diphenylpropane, β-nitro- (KONOWALOFF and DOBROWOLSKY), A., i, 764.
5-Ethoxy-1:3-diphenyltriazole (WHEELER and STATIROPOULOS), A., i, 722.
3-Ethoxy-1:4-diphenylurazole and 5-thio- (WHEELER and STATIROPOULOS), A., i, 720.
4-Ethoxy-1-ethylphthalazone (DAUBE), A., i, 210.
6-Ethoxy-1-ethylquinolone, 5-chloro- (HOWITZ and WITTE), A., i, 470.
Ethoxy-Δ²-*cyclo*hexene (BRUNEL), A., i, 869.
Ethoxyketo-. See Ketoethoxy-.
***d*-2-Ethoxy-1-γ-methyl-amyl- and -Δ^α^-pentenyl-benzenes** (KLAGES and SAUTTER), A., i, 580.
6-Ethoxy-1-methylquinolone, 5-chloro- (HOWITZ and WITTE), A., i, 470.
***p*-Ethoxyphenacyldialuric acid** (KÜHLING), A., i, 944.
***p*-Ethoxyphenyl** benzyl sulphide (TABOURY), A., i, 644.
9-Ethoxy-9-phenyl-10-anthrone (LIEBERMANN and LINDENBAUM), A., i, 522.
α-Ethoxy-α-phenylethane, β-nitro- (MEISENHEIMER and HEIM), A., i, 269.
5-Ethoxy-1-phenyl-1:2:3-triazole (DIMROTH and EBERHARDT), A., i, 99.
γ-Ethoxypropane, β-chloro-α-cyano- and α-cyano-β-hydroxy- (LESPIEAU), A., i, 256.
***dl*-α-Ethoxypropionic acid**, *l*-bornyl and *l*-menthyl esters, hydrolysis of, by alkali (MCKENZIE and THOMPSON), T., 1017 ; P., 184.
γ-Ethoxypropylene, α-cyano-. See γ-Ethoxycrotonic acid, nitrile of.
3-Ethoxy-4-pyridone (PERATONER and TAMBURELLO), A., i, 808.
2-Ethoxypyrimidine (FARBENFABRIKEN VORM. F. BAYER & CO.), A., i, 159.
3-Ethoxy-γ-pyrone (PERATONER and SPALLINO), A., i, 806.
6-Ethoxyquinoline, 5-chloro-, and its additive salts (HOWITZ and WITTE), A., i, 469.
Ethoxysuccinic acid, ethyl ester, action of ethyl sodiomalonate on (STAUDINGER), A., i, 736.
6-Ethoxy-3:4:5-trimethylpyridine, 2-hydroxy- (ROGERSON and THORPE), T., 1706.
5-Ethoxytritanolactone, 3-hydroxy- (v. LIEBIG), A., i, 782.
Ethyl alcohol, preparation of pure (WINKLER), A., i, 850.
formation of, from sugars (ERLENMEYER), A., i, 408.
and ethyl cyanide, molecular refractions of mixtures of (HOMFRAY), T., 1438 ; P., 226.
acidity of commercial, and its variations at the ordinary temperature (DUCHEMIN and DOURLEN), A., ii, 503.
spontaneous oxidation of (MATHIEU), A., i, 730.
in animal organs (NICLOUX), A., ii, 181.
in the tissues and fluids of the body (MAIGNON), A., ii, 406.
action of, on the heart of warm-blooded animals (LOEB), A., ii, 471.
compounds of, with bromine and chlorine (MCINTOSH), T., 784 ; P., 64, 120.
compounds of, with nitric, sulphuric, and chlorosulphonic acids (MCINTOSH), A., i, 677.
estimation of, in aqueous solutions by the freezing point (GAUNT), A., ii, 288.

Ethyl alcohol, estimation of, in beers by means of the Zeiss immersion refractometer (ACKERMANN), A., ii, 486; (ACKERMANN and STEINMANN), A., ii, 557.
estimation of, in presence of formaldehyde (LEFFMANN), A., ii, 865.
estimation of, in fusel oil (PETERS), A., ii, 768.
and methyl alcohol, estimation of, in tinctures by the immersion refractometer (LEACH and LYTHGOE), A., ii, 655.
Ethyl alcohol, amino-, melting point, specific gravity, and refractive index of (KNORR and MEYER), A., i, 748.
β-amino-, derivatives of (GABRIEL), A., i, 649.
*aci-di*nitro-, and its potassium salt (DUDEN and PONNDORF), A., i, 558.
Ethyl chlorosulphonate, reactions of (WILLCOX), A., i, 45.
cyanide and ethyl alcohol, molecular refractions of mixtures of (HOMFRAY), T., 1438; P., 226.
dioxyperthiocarbonate (BIILMANN), A., i, 626.
Ethyl ether, impure, oxidising action of (ROSSOLIMO), A., i, 295; (DITZ), A., i, 404.
and chloroform, effect of, on renal activity (THOMPSON), A., ii, 273.
action of, on dry seeds (BECQUEREL), A., ii, 474.
compounds of, with bromine and chlorine (MCINTOSH), T., 788; P., 64, 120.
compound of, with magnesium iodide (BLAISE), A., i, 111.
compounds of, with nitric, sulphuric, and chlorosulphonic acids (MCINTOSH), A., i, 677.
Ethyl ether, amino- (HENRY), A., i, 119.
and its salts, carbamides, and reactions (KNORR and MEYER), A., i, 747.
melting point, specific gravity, and refractive index of (KNORR and MEYER), A., i, 748.
*di*amino-, and its salts (GABRIEL), A., i, 862.
*di*imino-, *N*-diphthalyl derivative of (GABRIEL), A., i, 862.
Ethyl glycide ether. See Epiethylin.
nitrite, preparation of (MATUSCHEK), A., i, 256.
potassium xanthate, action of, on monohalogen substituted fatty acids and their derivatives (TRÖGER and VOLKMER), A., i, 15.
thiodicarbonate (HOLMBERG), A., i, 324.
Ethylacetoacetic acid, ethyl ester, sodium derivative, action of, on ethyl chloroacetate (MICHAEL), A., i, 856.
Ethylacetylacetone and its condensation products with polyvalent phenols (BÜLOW and DEIGLMAYR), A., i, 149.
α-**Ethylacrylic acid**, reactions of, and its derivatives (BLAISE and LUTTRINGER), A., i, 626.
Ethylallylacetic acid, ethyl ester (PERKIN and PICKLES), T., 659; P., 131.
Ethylallylconinium iodides, isomeric (SCHOLTZ), A., i, 297.
Ethylallyl*iso*propenylmethane (*β-methyl-γ-ethyl-*$\Delta^{\alpha\epsilon}$*-hexadiene*) and its tetrabromide (PERKIN and PICKLES), T., 660.
Ethylamine, action of, on cæsium (RENGADE), A., i, 634.
Ethylaminoconiine and its additive salts (LÖFFLER and KIRSCHNER), A., i, 940.
2-β-**Ethylaminoethylpiperidine** and its additive salts (LÖFFLER and KIRSCHNER), A., i, 939.
Ethylamino*cyclo*hexane, *di*hydroxy-, and its hydrochloride (BRUNEL), A., i, 869.
o-**Ethylamino*cyclo*hexanol** and its hydrochloride (BRUNEL), A., i, 869.
2-**Ethylaminophenetole**, 3:5-*di*nitro-, and its nitroamine (BLANKSMA), A., i, 431.
2-β-**Ethylaminopropylpyridine** and its additive salts and nitroso-derivative (LÖFFLER and KIRSCHNER), A., i, 939.
2-**Ethylamino-*p*-xylene**. See 2-*N*-Ethyl-*p*-xylidine.
Ethyl *n*- and *iso*-**amyl ketones** and their semicarbazones (BOUVEAULT and LOCQUIN), A., i, 18.
Ethylaniline, preparation of pure, from commercial ethylaniline (BLUME and KLÖFFLER), A., i, 875.
cinnamoyl and diphenylbromopropionyl derivatives (KOHLER and HERITAGE), A., i, 207.
Ethylanilinoazobenzene (VIGNON and SIMONET), A., i, 495.
Ethylanthranilic acid, ω-cyano- (BADISCHE ANILIN- & SODA-FABRIK), A., i, 438.
Ethylbenzene, electrolytic oxidation of (LAW and PERKIN), A., i, 761.
Ethylbenzenes, α-amino-. See α-Phenylethylamines.
p-**Ethylbenzeneazobenzene** and its derivatives (WILLGERODT and HARTER), A., i, 552.

p-**Ethyl***tert.*-**butylbenzene** (DARZENS), A., i, 66.
Ethylbutyramide, cyano- (CONRAD and ZART), A., i, 753, 754.
α-**Ethylbutyramide**, α-bromo- (KALLE & Co.), A., i, 638.
Ethylbutyranilide, cyano- (CONRAD and ZART), A., i, 753.
α-**Ethylbutyric acid**, γ-*tri*chloro-β-hydroxy-, and its methyl ester and salts (DOEBNER and SEGELITZ), A., i, 737.
Ethylbutyromethylamide, cyano- (CONRAD and ZART), A., i, 752.
α-**Ethylbutyryl chloride**, α-bromo- (KALLE & Co.), A., i, 638.
α-**Ethylbutyrylcarbamide** (FISCHER and DILTHEY), A., i, 37.
α-**Ethylbutyryl-carbamide** and **-urethane**, α-cyano- (CONRAD and ZART), A., i, 754.
α-**Ethylbutyryl-carbamide**, **-phenylcarbamide**, **-thiocarbamide**, and **-guanidine**, α-cyano- (MERCK), A., i, 178.
Ethylbutyryl-methyl- and **-phenylcarbamides**, cyano- (CONRAD and ZART), A., i, 755.
Ethylcarbamic anhydride, hydroxy-, nitrosoamine from (GABRIEL), A., i, 651.
O-**Ethyl***iso***carbamide** and its additive salts (STIEGLITZ and NOBLE), A., i, 639.
Ethylcarbylamine dibromide, action of aniline on (GUILLEMARD), A., i, 518.
Ethyldihydro*iso***indole** (DAUBE), A., i, 210.
Ethyldihydrophenanthranil, hydroxy-, and its acetyl derivative (JAPP and KNOX), T., 682.
Ethylene and mixtures of ethylene and carbon monoxide, action of the silent electric discharge on (COLLIE), T., 1543; P., 201.
action of diazomethane on (AZZARELLO), A., i, 867.
derivatives, new isomerism of (ERLENMEYER and ARNOLD), A., i, 193.
Ethylene, *di-* and *tetra*-iodo- (E. and H. ERDMANN), A., i, 165.
Ethylene *di*bromide, preparation of (PERKIN and SIMONSEN), T., 856; P., 188.
interaction of, with magnesium, and reactions of the additive compound (BISCHOFF), A., i, 589.
magnesium derivatives, compounds of, with aromatic aldehydes (AHRENS and STAPLER), A., i, 423, 868.
glycol and water, viscosity of (DUNSTAN), T., 13.
Ethylene thiocarbonate (FRASSETTI), A., i, 256.
xanthate, reactions of (FRASSETTI), A., i, 256.
Ethylene*di***-bromo-** and **-chloro-diamines** and their *s*-diacyl derivatives (CHATTAWAY), T., 382; P., 61.
Ethylene*tetra***-bromo-** and **-chloro-diamines** (CHATTAWAY), T., 381; P., 61.
Ethylenediamine, synthesis of (NEUBERG and NEIMANN), A., i, 686.
s-diacyl derivatives of (CHATTAWAY), T., 383; P., 61.
compounds of, with cobalt salts (GERB), A., i, 328.
Ethylenediaminephenylcarbimide (LOEWY and NEUBERG), A., i, 158.
Ethylenedicarboxylic acids. See Fumaric acid and Maleic acid.
Ethylenedikairolinium salts, rotation of (WEDEKIND), A., i, 520.
Ethylenedipiperidine and its additive salts (KNORR, HÖRLEIN, and ROTH), A., i, 834.
Ethylenetricarboxylic acid, cyano-, ethyl ester (SCHMITT), A., i, 508.
Ethylerythric acid (*ethylerythritic acid*) (LESPIEAU), A., i, 319, 406.
α-**Ethylgeraniol** (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 147.
α-**Ethylhydracrylic acid** and its salts, ethyl ester, phenylhydrazine, and phenylurethane (BLAISE and LUTTRINGER), A., i, 505.
Ethylidenehydrazine, benzoyl derivative (STOLLÉ and MÜNCH), A., i, 94.
Ethylidenephthalide and nitro- (DAUBE), A., i, 210.
3-**Ethylindole** and its picrate (PLANCHER and CARRASCO), A., i, 719.
β-**Ethylmalic acid** and its salts (DOEBNER and SEGELITZ), A., i, 737.
Ethylmalonic acid, ethyl ester, sodium derivative, action of, on ethyl chloroacetate (MICHAEL), A., i, 856.
Ethyloxamic acid, bromo-, ethyl ester (GABRIEL), A., i, 651.
o-**Ethylphenol**, β-amino-, and its methyl ether, and their hydrochlorides (PSCHORR and EINBECK), A., i, 590.
p-**Ethylphenol**, *tri-* and *tetra*-bromo-, action of nitric acid on (ZINCKE and REINBACH), A., i, 882.
p-**Ethylphenylbenzylidenehydrazine** (WILLGERODT and HARTER), A., i, 552.
p-**Ethylphenylhydrazine** and its additive salts (WILLGERODT and HARTER), A., i, 551.
p-**Ethylphenyltolylidenehydrazine** (WILLGERODT and HARTER), A., i, 552.

Ethylphthalamic acid, β-bromo- (GABRIEL), A., i, 650.

Ethylphthalamic anhydride, β-hydroxy-, and its additive salts (GABRIEL), A., i, 650.

1-Ethylphthalazine, 4-chloro-, and **1-Ethylphthalazone** (DAUBE), A., i, 210.

Ethylphthalimide, β-bromo-, nitrosoamine from (GABRIEL), A., i, 651.

Ethylphthalimidine (DAUBE), A., i, 210.

2-Ethylpiperidine, amino-, and its additive salts (LÖFFLER and KIRSCHNER), A., i, 939.

Ethylpiperonyl ether (MAMELI), A., i, 203.

Ethylpiperonylcarbinol, benzoyl derivative (MAMELI), A., i, 203.

α-Ethylpropionic acid, *β-mono-* and *αβ-di*-bromo- and β-iodo- (BLAISE and LUTTRINGER), A., i, 627.

Ethylpropylacetic acid. See α-Ethylvaleric acid.

α-Ethyl-β-propylacraldehyde (GORHAN), A., i, 171.

5-Ethyl-5-propylbarbituric acid (*5-ethyl-5-propylmalonylcarbamide*), 4-imino- (CONRAD), A., i, 752.

Ethyl *iso*propyl ketone and its oxime from the aldol, $C_6H_{14}O_2$ (MUNK), A., i, 560.

Ethylpropylmalonic acid and its esters and salts (RASETTI), A., i, 562.

5-Ethyl-5-propylmalonylguanidine and 4-imino- (CONRAD), A., i, 752.

2-Ethylpyridine, β-hydroxy- (*2-picolylalkine*), derivatives of (LÖFFLER and KIRSCHNER), A., i, 938.

5-Ethylpyrimidine, 4:6-*di*imino-2-thio- (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 671.

1-Ethyl-2-quinolone, 5-chloro-6-hydroxy- (HOWITZ and BÄRLOCHER), A., i, 375; (HOWITZ and WITTE), A., i, 470.

8-nitro- (DECKER, GADOMSKA, SANDBERG, and STAVROLOPOULOS), A., i, 374.

Ethyl-*p*-quinone, *tri*bromo-, and its anilide and -**quinol**, *tri*bromo-, and its diacetyl derivative (ZINCKE and REINBACH), A., i, 882.

Ethyl-ψ-quinone, 2:3:5-*tri-* and 2:3:5:6-*tetra*-bromo-, and their acetyl derivatives (ZINCKE and REINBACH), A., i, 882.

3-Ethylquinuclidine (KOENIGS and BERNHART), A., i, 825.

Ethylthiolbenzylacetylacetone (RUHEMANN), T., 20.

β-ψ-Ethylthiolcarbamideacrylic acid, α-amino-, *N*-benzoyl derivative of, sodium salt (JOHNSON), A., i, 836.

5-Ethylthiol-1:3-diphenyltriazole (WHEELER and STATIROPOULOS), A., i, 722.

2-Ethylthiol-5:6-μ-phenyloxazolinepyrimidine (JOHNSON and CLAPP), A., i, 836.

2-Ethylthiol-5-phenyluracil (WHEELER and BRISTOL), A., i, 485.

2-Ethylthiolpyrimidine, 5-bromo-, and its derivatives (WHEELER and BRISTOL), A., i, 485.

2-Ethylthiolpyrimidine-6-thioncarbamic acid, ethyl ester, and its 5-bromo- and 5-methyl derivatives (WHEELER and BRISTOL), A., i, 484.

2-Ethylthiol-6-thiocarbamidopyrimidine and its derivatives (WHEELER and BRISTOL), A., i, 484.

2-Ethylthiol-6-thiocarbimidopyrimidine and 5-bromo- (WHEELER and BRISTOL), A., i, 483.

2-Ethylthiophen, influence of light and heat on the bromination and chlorination of (OPOLSKI), A., i, 367.

Ethylthujone and its semicarbazone (HALLER), A., i, 602.

***m*-Ethyltoluene**, preparation and nitration of (BARTOW and SELLARDS), A., i, 424.

1-Ethyl-1:2:4-triazole and its additive salts (PELLIZZARI and SOLDI), A., i, 673.

α-Ethyltricarballylic acid and its triamide (PINNER), A., i, 464.

1-Ethyl-2:3:4-trihydrocinnoline (TICHWINSKY), A., i, 92, 93.

4-Ethyluracil and 5-bromo- (WHEELER, BRISTOL, and JOHNSON), A., i, 483.

5-Ethyluramil (FISCHER and DILTHEY), A., i, 37.

α-Ethylvaleramide, α-bromo- (KALLE & Co.), A., i, 639.

α-cyano- (CONRAD and ZART), A., i, 754.

α-Ethylvaleric acid and its esters, amide, and chloride (RASETTI), A., i, 562.

α-cyano-, ethyl ester (CONRAD), A., i, 752.

Ethyl-*p*-xylidine (HINSBERG and KESSLER), A., i, 339.

2-*N*-Ethyl-*p*-xylidine, 3:5-*di*nitro-, and its nitroamine (BLANKSMA), A., i, 426.

Ethylyohimboaic acid (SPIEGEL), A., i, 817.

Eucarvone and its reduction products, constitution of (WALLACH and KÖHLER), A., i, 450.

Eucarvoxime and its additive haloids (WALLACH and KÖHLER), A., i, 451.

Eudiometer used by the late Sir Edward Frankland, presentation of, to the Society by Professor Percy Frankland, P., 83.
Eugenol and its derivatives (FRANKFORTER and LANDO), A., i, 592.
5-amino-, and its salts and acetyl derivatives (ODDO and PUXEDDU), A., i, 432.
Euphorbic acid, Euphorboresens, and **Euphorbone** (TSCHIRCH and PAUL), A., i, 538.
Euphorbium, constituents of (TSCHIRCH and PAUL), A., i, 538.
Europium and its ultra-violet spectrum (CROOKES), A., ii, 392; (EBERHARD), A., ii, 587.
phosphorescent spectra of (CROOKES), A., ii, 783.
samarium, and gadolinium, spectrographic investigations of the Urbain-Lacombe method for the separation of (EBERHARD), A., ii, 587.
Euxanthic acid and *iso***Euxanthic acid** (NEUBERG and NEIMANN), A., i, 412.
Excrements, animal, analyses of some (MCCRAE), A., ii, 348.
human, manurial value of (SEBELIEN), A., ii, 114.
Excretion of calcium and magnesium, inter-relationship of the (MALCOLM), A., ii, 271.
of carbon dioxide after the administration of various sugars (JOHANSSON, BILLSTRÖM, and HEIJL), A., ii, 329.
of creatinine (MENDEL and CLOSSON), A., ii, 186.
of iron in dogs and cats (SATTLER), A., ii, 333.
Explosion waves (DIXON), A., ii, 577.
Explosive, calcium carbide as an, in mining operations (GUÉDRAS), A., ii, 87.
Explosives containing gun-cotton, deterioration of (HAKE and LEWIS), A., i, 512.
See also Gun-cotton and Gunpowder.
Extraction apparatus for large quantities of vegetable powders (LOHMANN), A., ii, 309.
Extractor, new (SANNA), A., ii, 58.
for extracting liquids with chloroform (BAUM), A., ii, 57.
Exudates, enzymes and anti-enzymes of (OPIE), A., ii, 845.
Eye. See Frog's eyeball, Iris, and Retina.

F.

Fæces, lactose fermenting bacteria in (MACCONKEY), A., ii, 601.
Fæces, action of dextrose on the lactose-fermenting organisms of (HARDEN), A., ii, 748.
human, substances soluble in ether in (OEFELE), A., ii, 102.
statistical tables of the amount of nitrogenous substances in (OEFELE), A., ii, 337.
amounts and origin of purine bases in (KRÜGER and SCHITTENHELM), A., ii, 645.
estimation of phosphoric acid and sulphur in (DUBOIS), A., ii, 609.
Faraday lecture, Ostwald's, criticism of (NASINI), A., ii, 514.
Faraday's law and electrostenolysis (RICHARDS and LACY), A., ii, 299.
Fat, production of, from proteid by *Bacillus pyocyaneus* (BEEBE and BUXTON), A., ii, 108.
apparatus for determining the specific gravity of solid (RAKUSIN), A., ii, 303.
the true dropping point of, and an apparatus for determining it (UBBELOHDE), A., ii, 658.
decomposition of (RAHN), A., ii, 647.
extent to which, is decomposed in the stomach (ZINSSER), A., ii, 732.
nitrogenous impurities of (SCHMITT), A., ii, 769.
bromine absorption of (TELLE), A., ii, 362.
detection of palm oil when used as a colouring matter in (CRAMPTON and SIMONS), A., ii, 362.
estimation of (LIEBERMANN), A., ii, 774.
estimation of, in butter. See Butter.
estimation of, in infant and invalid foods (COCHRAN), A., ii, 618.
estimation of, in milk. See Milk.
See also Diglycerides.
Fatty compounds, increase in the rotatory power of, on transformation into cyclic compounds (HALLER and DESFONTAINES), A., ii, 429.
Feeding experiments on human beings (CHITTENDEN), A., ii, 179; (FOLIN), A., ii, 269.
Fehling's solution, active components of (MARRE and STOLLE), A., i, 738.
potassium bromide as indicator when using (BERTI), A., ii, 57.
Fermentation, comparative production of alcohol and carbon dioxide during (LINDET and MARSAIS), A., ii, 109.
alcoholic, by yeast, chemical dynamics of (SLATOR), P., 304.
chemical reactions occurring during (KNOOP and WINDAUS), A., i, 510; (BUCHNER and MEISENHEIMER), A., ii, 274.

Fermentation, alcoholic, production of acetic acid in (REISCH), A., ii, 548.
cell-free, researches on (BUCHNER and ANTONI), A., ii, 473; (FISCHER), A., ii, 841.
enzymatic, from the point of view of chemical dynamics (v. EULER), A., ii, 378.
See also Yeast.
Fermenting liquids, influence of metals on (NATHAN, SCHMID, and FUCHS), A., ii, 340, 847.
Ferments. See Enzymes.
Ferric and **Ferrous compounds** and **Ferrides**. See under Iron.
Ferrocyanides, source of the excessive moisture found in the combustion of certain (MULLER), A., i, 756.
hydroxy- (CHRÉTIEN), A., i, 578.
Ferrosilicon, estimation of carbon in (JENE), A., ii, 355.
estimation of silicon in (LUCCHÈSE), A., ii, 118, 119; (K.), A., ii, 420.
Ferrosilicons, analysis of (LUCCHÈSE), A., ii, 119.
Ferrum redactum, estimation of metallic iron in (CHRISTENSEN; BARMWATER), A., ii, 654.
Fertilisation, physico-chemical theory of (FISCHER and OSTWALD), A., ii, 329.
Fertilisers, nitrification of different (WITHERS and FRAPS), A., ii, 110.
estimation of potassium in (VEITCH), A., ii, 204.
See also Manures.
Fever, influence of, on the reducing action of the organism (HERTER), A., ii, 103.
Fibrin ferments in snake venom (MARTIN), A., ii, 411.
Fibrinogen, origin of (DOYON, MOREL, and KAREFF), A., ii, 402.
Fibrinoglobulin, presence of, in fibrinogen solutions (HUISKAMP), A., i, 499; (HEUBNER), A., i, 725.
Fiedlerite, composition of (DE SCHULTEN), A., ii, 173.
Filter, new (SHIMER), A., ii, 349.
Filter funnel. See Funnel.
Filter tube, new (MASON), A., ii, 381.
Fir, Siberian. See *Abies sibirica*.
Fisetin, synthesis of (v. KOSTANECKI and NITKOWSKI), A., i, 915.
Fish, pond feeding experiments at Hellendorf and Geeste in 1903 (CRONHEIM and GIESECKE), A., ii, 649.
Fishes, osmotic pressure of blood and urine in (DEKHUYZEN), A., ii, 836.
eggs. See Eggs.
Fistula, Eck's, in dogs (HAWK), A., ii, 183.
poisonous symptoms in dogs with (ROTHBERGER and WINTERBERG), A., ii, 408.
Flacherie. See Silkworm disease.
Flame, Bunsen. See Bunsen flame.
Flames, cause of the luminosity of (MISTELI), A., i, 849.
contact phenomena in, under the influence of solids (BAIKOFF), A., ii, 379.
ionisation in (MASSOULIER), A., ii, 140.
Flavinduline, condensation of, with methylene compounds (SACHS and BARGELLINI), A., i, 488.
Flavone, 3′:4′-*di*hydroxy- and its diacetyl derivative (BERSTEIN, FRASCHINA, and v. KOSTANECKI), A., i, 607.
5:7:4′-*tri*hydroxy-. See Apigenin.
Flavonol, 3′-hydroxy-, and its acetyl derivative (GUTZEIT and v. KOSTANECKI), A., i, 366.
4′-hydroxy-, and its diacetyl derivative (EDELSTEIN and v. KOSTANECKI), A., i, 460.
3′:4′-*di*hydroxy-, and its triacetyl derivative (BERSTEIN, FRASCHINA, and v. KOSTANECKI), A., i, 607.
7:2′-*di*hydroxy- (v. KOSTANECKI and v. SZLAGIER), A., i, 77.
7:3′-*di*hydroxy-, and its triacetyl derivative (v. KOSTANECKI and WIDMER), A., i, 78.
7:4′-*di*hydroxy-, and its triacetyl derivative (JUPPEN and v. KOSTANECKI), A., i, 79.
7:3′:4′-*tri*hydroxy-. See Fisetin.
7:8:4′-*tri*hydroxy-, and its acetyl derivative (v. KOSTANECKI and SCHREIBER), A., i, 808.
7:8:3′:4′-*tetra*hydroxy-, and its pentaacetyl derivative (v. KOSTANECKI and RUDSE), A., i, 367.
Flax, bacteria which are active in the maceration of (BEYERINCK and VAN DELDEN), A., ii, 749.
Flesh, chemistry of (GRINDLEY and EMMETT), A., ii, 542.
chemical changes produced in, by Fungi (BUTJAGIN), A., ii, 101.
Flour, influence of bran on the suitability of, for bread-making (LINDET and AMMANN), A., ii, 780.
detection of sawdust in (PAGANINI), A., ii, 360.
Flower, consumption of odorous products during the maturation of the (CHARABOT and HÉBERT), A., ii, 850.
Flowers of sulphur. See under Sulphur.

Fluavils from various gutta-perchas (TSCHIRCH and MÜLLER), A., i, 453.
Fluids, human body, detection of lævulose in (OFNER), A., ii, 769.
Fluoran, *di-* and *tetra*-chloro- (BADISCHE ANILIN- & SODA-FABRIK), A., i, 149.
Fluorene, refractive and magnetic rotatory power of (PERKIN), T., 1293.
derivatives, attempts to synthesise (DIELS and BUNZL), A., i, 431.
halochromism of (SMEDLEY), T., 1250; P., 221.
Fluorene, 9:9-*di*chloro-derivative (*fluorenene chloride*) and disulphide compound of (SMEDLEY), T., 1251; P., 221.
Fluorenone, refractive and magnetic rotatory power of (PERKIN), T., 1293.
derivative, $C_{15}H_{12}O_5$, and its tetra-acetyl derivative, from the reduction of $C_{16}H_{10}O_6$ (DUREGGER), A., i, 702.
Fluorenonecarboxylic acid, methyl and ethyl esters (GOLDSCHMIEDT and LIPSCHITZ), A., i, 133.
Fluorenone-5-carboxylic acid (PICK), A., i, 68.
Fluorenonediphenylhydrazone (ARMSTRONG and ROBERTSON), T., 1291; P., 180.
Fluorenonoylbenzoic acid and its acetyl derivative and isomeric methyl esters (GOLDSCHMIEDT and LIPSCHITZ), A., i, 133.
o-**Fluorenoylbenzoic acid** and its acetyl derivative and anhydride and its oxime (GOLDSCHMIEDT and LIPSCHITZ), A., i, 132.
Fluorescein (HELLER and MEYER), A., i, 788.
influence of amino- and nitro- groups on the fluorescence of (BOGERT and WRIGHT), A., i, 896.
Fluorescence and photodynamic action (v. TAPPEINER, JODLBAUER, and LEHMANN), A., ii, 602.
and solvent (KAUFFMANN and BEISSWENGER), A., ii, 131.
investigation of (KAUFFMANN), A., ii, 783.
limits of visibility of, and the higher limit of the absolute weight of atoms (SPRING), A., ii, 494.
limits of visibility of, and the maximum value of the absolute weight of the atom of hydrogen (SPRING), A., ii, 565.
Kehrmann's explanation of change of (KAUFFMANN and BEISSWENGER), A., ii, 218.
of sodium vapour and the resonance radiation of electrons (WOOD), A., ii, 783.
Fluorescent substances, participation of oxygen in the action of (JODLBAUER and v. TAPPEINER), A., ii, 603.
Fluorine, spectrum of (LUNT), A., ii, 782.
refractive index of gaseous (CUTHBERTSON and PRIDEAUX), A., ii, 781.
liquid, action of solid methane on (MOISSAN and CHAVANNE), A., i, 253.
action of, on the oxides of nitrogen (MOISSAN and LEBEAU), A., ii, 517.
Hydrofluoric acid (*hydrogen fluoride*) (DEUSSEN), A., ii, 311.
action of, on nitrogen sulphide (RUFF and THIEL), A., ii, 160.
separation of, from sulphuric acid (EHRENFELD), A., ii, 417.
Fluorides of the heavy metals (BÖHM), A., ii, 249.
Hydrofluorides of some anilides and substituted anilines (WEINLAND and LEWKOWITZ), A., i, 518.
Hydrofluosilicic acid, behaviour of, with various reagents (GAWALOWSKI), A., ii, 387.
Fluorine, detection of (PIETTRE and VILA), A., i, 500.
estimation of (SCHUCH), A., ii, 552.
and silica, estimation and separation of (SEEMANN), A., ii, 555.
Fluorones from the condensation of hydroxyquinol with aldehydes (HEINTSCHEL), A., i, 809.
Fluorspar, quick method for the valuation of (GREGORY), A., ii, 856.
Fly agaric. See *Amanita muscaria*.
Foods, decomposition of, by Bacteria (KÖNIG, SPIECKERMANN, and SEILER), A., ii, 472; (KÖNIG), A., ii, 747.
detection of boric acid in (v. SPINDLER), A., ii, 480; (SELLIER), A., ii, 554.
detection of salicylic acid in (GORNI), A., ii, 658.
infant and invalid, estimation of fat in (COCHRAN), A., ii, 618.
estimation of phosphoric acid in (FLEURENT), A., ii, 116; (PELLET), A., ii, 353.
estimation of phosphoric acid and sulphur in (DUBOIS), A., ii, 609.
estimation of salicylic acid in (HARRY and MUMMERY), A., ii, 426.
estimation of water in (BENEDICT and MANNING), A., ii, 349.
Food-stuffs, passage of, from the stomach and through the small intestine (CANNON), A., ii, 44.

Formaldehyde, presence of, in the atmosphere of towns (TRILLAT), A., i, 325.
presence and formation of, in various combustions (TRILLAT), A., i, 325.
formation of, in the combustion of tobacco (TRILLAT), A., ii, 53.
supposed formation of, in plants (PLANCHER and RAVENNA), A., ii, 191.
synthesis of (CHAPMAN and HOLT), T., 916; P., 171.
thermal decomposition of (BONE and SMITH), T., 910; P., 171.
and formate formation (H. and A. v. EULER), A., i, 633; (AUERBACH), A., i, 740.
aqueous solutions of (AUERBACH and BARSCHALL), A., i, 859.
distinction between acetaldehyde and (LEYS), A., ii, 655.
condensation products of (H. and A. v. EULER), A., ii, 343.
condensation products of, with primary aromatic amines (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 643.
condensation of, with anthranilic acid (BADISCHE ANILIN- & SODA-FABRIK), A., i, 437.
condensation products of, with glycoluril (BEHREND, MEYER, and RUSCHE), A., i, 419.
condensation of, with phenol (HENSCHKE), A., i, 429.
action of, on pyridine (FORMÁNEK), A., i, 374.
action of, on thiocarbanilide (OPFERMANN), A., i, 770.
condensation of, with isovaleraldehyde (LICHTENSTERN), A., i, 509.
compounds of, with amides of monobasic acids (EINHORN), A., i, 344.
sodium hydrogen hyposulphite (PRUD'HOMME), A., ii, 157.
and its lead derivative (BAUMANN, THESMAR, and FROSSARD), A., i, 260.
two new reactions for (RAMSDEN), A., ii, 771.
analysis of (ORLOFF), A., ii, 200.
commercial analysis of (FRESENIUS and GRÜNHUT), A., ii, 211.
detection and estimation of, colorimetrically (BONNET), A., ii, 488.
detection of, in milk (BONNET; NICOLAS), A., ii, 488; (UTZ), A., ii, 560.
methods of estimating (WILLIAMS), A., ii, 488.
estimation of (GOLDSCHMIDT), A., ii, 867.
Formaldehyde, estimation of, gasometrically (FRANKFORTER and WEST), A., ii, 619.
the hydrogen peroxide method of estimating (HAYWOOD and SMITH), A., ii, 771.
estimation of methyl alcohol in (GNEHM and KAUFLER), A., ii, 209.
Formaldehydesulphoxylic acid, barium and sodium salts (BAZLEN), A., ii, 240.
sodium salt, crystalline form of (OSANN), A., i, 568.
Formalin. See Formaldehyde.
Formamide, action of, on acetophenone (REICH), A., i, 35.
decomposition of salts in (BRUNI and MANUELLI), A., ii, 689.
Formazyl and *di-p*-bromo-, *di-o*-iodo-, and *di-o*- and *-p*-nitro- (BUSCH and WOLBRING), A., i, 493.
Formazylacrylic acid and 4:4′-*di*bromo-, ethyl esters (PRAGER), A., i, 391.
Formazylformic acid, 4:4′-*di*bromo-, ethyl ester (PRAGER), A., i, 392.
Form*iso*butaldol. See Formyl*iso*butyraldol.
Formhydroxamic acid, derivatives of (BIDDLE), A., i, 180.
Formic acid, preparation and volumetric estimation of (RUPP), A., ii, 291.
and water, molecular refractions of mixtures of (HOMFRAY), T., 1436; P., 225.
action of, on tremors (CLÉMENT), A., ii, 408.
Formic acid, salts, formation of, from formaldehyde (H. and A. v. EULER), A., i, 633; (AUERBACH), A., i, 740.
bismuth and tin salts (COLONNA), A., i, 852.
mercuric salts, thermochemistry of (VARET), A., ii, 504.
Formic acid, phenyl ester, and its reactions (AUGER), A., i, 14.
Formoxime, chloro-, methyl ether of (BIDDLE), A., i, 180.
Formylacetic acid, ethyl ester, and its reactions, and oxime (MICHAEL), A., i, 563.
Formylazo-4-hydroxy-benzene, **-3-methylbenzene**, and **-naphthalene** (BORSCHE and OCKINGA), A., i, 719.
2-Formylazo-1-hydroxynaphthalene (BORSCHE and OCKINGA), A., i, 719.
Formyl*iso*butyraldol, condensation of, with acetaldehyde (WEIS), A., i, 17; (SCHACHNER), A., i, 171.
condensation of, with dimethylaniline (SAMEC), A., i, 489.

Formylglyoxylic acid, ethyl ester, phenylhydrazones of (MICHAEL), A., i, 564.
Formylhippuric acid, ethyl ester (ERLENMEYER and STOOP), A., i, 120.
d-**Formylmenthylamine** (KONDAKOFF), A., i, 798.
α-**Formylpropionic acid**, ethyl ester, and its reactions, and oxime (MICHAEL), A., i, 563.
Fortior. See Copper aluminium alloy.
Freezing point, depression of the, in dilute solutions of highly dissociated electrolytes (JAHN), A., ii, 145.
modification of van't Hoff's theory of the depression of the (GOEBEL), A., ii, 679.
of binary mixtures of organic substances (PHILIP and SMITH), T., 1735; P., 255.
Friedel and Crafts' reaction (BOESEKEN), A., i, 268, 423, 424, 583.
use of phenyl ether in the (KIPPER), A., i, 648.
Frog, eyeball of, photoelectrical effects in (WALLER), A., ii, 545.
muscle of. See under Muscle.
d-**Fructose.** See Lævulose.
Fruit, influence of, on the precipitation of the uric acid of the urine (JEROME), A., ii, 543.
Fruit trees, manures for (CLAUSEN), A., ii, 478.
Fucosephenylosazone (MAYER and TOLLENS), A., i, 746.
Fuel, liquid, estimation of sulphur in (GOETZL), A., ii, 761.
Fuels, evolution of carbon in (BAY and ALIX), A., ii, 246.
estimation of arsenic in (MCGOWAN and FLORIS), A., ii, 354.
See also Coal.
Fulgenic acids and **Fulgides**, colour of (STOBBE, GADEMANN, LENZNER, and ROSE; STOBBE and LEUNER), A., i, 857.
Fulminic acid, molecular weight of (WÖHLER), A., i, 419.
mercury salt, formation of (WÖHLER and THEODOROVITS), A., i, 418.
possible existence of esters of (BIDDLE), A., i, 180.
Fulminuric acids, constitution of (ULPIANI), A., i, 750.
Fumaric acid, chloro-, iodosochloride of, and chloroiodo- (THIELE and PETER), A., i, 735.
Fumaroprotocetraric acid and its salts (HESSE), A., i, 138.
Fundulus eggs. See Eggs.
Fungi, chemical changes produced in flesh by (BUTJAGIN), A., ii, 101.
Fungi, presence of trehalase in (BOURQUELOT and HÉRISSEY), A., ii, 113.
carbamide from (GAZE), A., ii, 277.
formation and *rôle* of fatty substances in (PERRIER), A., ii, 475.
See also Moulds and Yeasts.
Funnel, filter, for the estimation of paraffin in mineral oil distillates (FLEISCHER), A., ii, 486.
Furan (*furfuran*) series, researches in the (MARQUIS), A., i, 224.
Furfuraldehyde, action of methylamine and dimethylamine on (LITTERSCHEID), A., i, 76.
Furfurylidenehippuric acid and its esters, amide, imide, and piperidide (ERLENMEYER and STADLIN), A., i, 238.
Furfurylidenehydrazine, benzoyl derivative, and its silver compound (STOLLÉ and MÜNCH), A., i, 94.
Furfurylidenetetrazoline (RUHEMANN and MERRIMAN), T., 1778.
Furnace, electric. See under Electrochemistry.
Furoinoximes, *α*- and *β*-, and their acetyl derivatives and compounds with phenylcarbimide (WERNER and DETSCHEFF), A., i, 225.
Furoyl derivatives, formation of, by means of pyromucyl chloride (BAUM), A., i, 149.
Fusel oil (PRINGSHEIM), A., ii, 274.
origin of (EMMERLING), A., ii, 340; (PRINGSHEIM), A., ii, 848.
detection and estimation of (TAKAHASHI), A., ii, 358.
estimation of alcohol in (PETERS), A., ii, 768.

G.

Gabbro, orbicular, from California (LAWSON), A., ii, 178.
Gadolinium, atomic weight of (URBAIN), A., ii, 250.
new spectrum of (URBAIN), A., ii, 458.
ultra-violet spectrum of (CROOKES), A., ii, 250; (EBERHARD), A., ii, 587.
europium, and samarium, spectrographic investigations of the Urbain-Lacombe method for the separation of (EBERHARD), A., ii, 587.
Galactose, birotation of (HEIKEL), A., i, 173.
Galactose-*d*-phenylamylhydrazones (NEUBERG and FEDERER), A., i, 300.
Galena, accuracy of the dry assay of, in an iron crucible (LOWE), A., ii, 205.

Gall-bladder, contractive mechanism of the (BAINBRIDGE and DALE), A., ii, 842.
Gallaldehyde trimethyl ether and its oxime (HEFFTER and CAPELLMANN), A., i, 877.
Gallamine-blue and its derivatives (GNEHM and BAUER), A., i, 831.
Gallic acid, oxidation of (PERKIN and NIERENSTEIN), T., 1429.
electrolytic oxidation of (A. G. and F. M. PERKIN), P., 212.
methyl ethers and methyl ester of (GRAEBE and MARTZ), A., i, 703.
trimethyl ether, amide of (GRAEBE and SUTER), A., i, 703.
Gallic acid, methyl ester (NIERENSTEIN), A., i, 805.
Gallonitrile trimethyl ether (HEFFTER and CAPELLMANN), A., i, 877.
Gallotannic acid, decomposition of (UTZ), A., i, 135.
methylation of (ROSENHEIM), P., 157.
Gambier catechu, constituents of (PERKIN), T., 398; P., 89.
Gas, coal. See Coal gas.
Gas-absorption apparatus (NOWICKI), A., ii, 760.
Gas analysis, use of the incandescent mantle in (MASON and WILSON), P., 296.
apparatus for (FIEBER), A., ii, 278; (KARLÍK), A., ii, 279; (BABB), A., ii, 348; (POLLACCI), A., ii, 478; (WHITE and CAMPBELL), A., ii, 607; (NEUMANN), A., ii, 855.
Gas balance (GRIMSEHL), A., ii, 809.
Gas-evolution apparatus, new (BOŠNJAKOVIĆ), A., ii, 20.
Gas holder with constant flow (BETTI), A., ii, 310.
Gas pressure regulator, simple (MAREK), A., ii, 448.
Gas-regulators for thermostats, design for (LOWRY), T., 1030; P., 181.
Gaseous substances, metastable states in reactions between solid substances and (LEY and WIEGNER), A., i, 749.
Gases from the soils, water, and springs of Italy (NASINI, ANDERLINI, and SALVADORI), A., ii, 538.
dissolved in minerals (HÜTTNER), A., ii, 172.
freshly prepared, electrical conductivity of (BLOCH), A., ii, 72.
disruptive discharge in, at high pressures (C. E. and H. GUYE), A., ii, 668.
compressibility of, between one atmosphere and half an atmosphere of pressure (RAYLEIGH), A., ii, 232, 373.
Gases, fundamental functions of one-component ideal-constituent (BELL and TREVOR), A., ii, 374.
equation of condition for (GOEBEL), A., ii, 149.
apparatus for measuring the absolute coefficient of internal friction of (CHELLA), A., ii, 629.
incomplete combustion of (MISTELI), A., i, 849.
solidification of, by means of liquid air; lecture experiment (LANG), A., ii, 810.
liquefied, heat of vaporisation of (MATHIAS), A., ii, 372.
Gastric digestion. See Digestion.
juice, concentration of hydrogen ions in pure, and its relation to electrical conductivity and acidity (FRAENCKEL), A., ii, 403.
secretion, chemical mechanism of (EDKINS), A., ii, 730.
Gastro-enteritis, bacteriology of infectious (POTTEVIN), A., ii, 748.
Géin and **Géase** from Herb Bennett root (BOURQUELOT and HÉRISSEY), A., ii, 345.
Gelatin rendered insoluble by exposure to light in presence of chromic acid or chromates, composition of (A. and L. LUMIÈRE and SEYEWETZ), A., i, 848.
impregnated with potassium dichromate and rendered insoluble by subsequent exposure to light, composition of (A. and L. LUMIÈRE and SEYEWETZ), A., i, 847.
hydrolysis of (SKRAUP), A., i, 398, 619.
oxidation of, by calcium permanganate (KUTSCHER and SCHENCK), A., i, 251; (SEEMANN), A., i, 619.
influence of acids and alkalis on the swelling of (OSTWALD), A., i, 954.
as a substitute for proteid in food (MURLIN), A., ii, 180.
in metabolism (KAUFFMANN), A., ii, 735.
β-Gelatin, swelling of (OSTWALD), A., i, 848.
Gems, action of radium emanations on (BASKERVILLE and LOCKHART), A., ii, 622.
Gentiamarin (TANRET), A., i, 803.
Gentiin and **Gentienin** (TANRET), A., i, 714.
Gentiogenin, crystalline, preparation of (HÉRISSEY), A., i, 805.
Gentiopicrin and its salts and pentaacetyl derivative (TANRET), A., i, 655.

Geraniol, α-derivatives of (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 147.
*cyclo***Geraniolideneacetone** (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 653.
Gerhardtite from Arizona (LINDGREN and HILLEBRAND), A., ii, 97.
Germinating grains, influence of radium on the respiratory energy of (MICHEELS and DE HEEN), A., ii, 431.
Germination, is, possible in absence of air? (TAKAHASHI), A., ii, 343.
Geum urbanum. See Herb Bennett.
Ginger grass oil (SCHIMMEL & Co.), A., i, 536; (WALBAUM and HÜTHIG), A., i, 603.
dihydrocuminol from (WALBAUM and HÜTHIG), A., i, 53.
Giorgiosite from Giorgios (LACROIX), A., ii, 464.
Glands, mammary, removal of, during lactation (PORCHER), A., ii, 469, 600.
thymus, grafting of, in animals (DUDGEON and RUSSELL), A., ii, 842.
thyroid, influence of, on autolysis (SCHRYVER), A., ii, 267.
thyroid and parathyroid, functions of (VINCENT and JOLLY), A., ii, 101.
influence of meat diet on (WATSON), A., ii, 271.
submaxillary, influence of atropine and pilocarpine on the circulation through the (HENDERSON and LOEWI), A., ii, 743.
Glass, physical properties of, as functions of the chemical composition (ZSCHIMMER), A., ii, 709.
action of ultra-violet light on (FISCHER), A., ii, 320; (AVERY), A., ii, 589.
changes of colour caused by the action of certain rays on (AVERY), A., ii, 589; (RUEGER), A., ii, 709.
influence of various kinds of, on the accuracy of Kjeldahl's nitrogen process (SCHÖNEWALD and BARTLETT), A., ii, 201.
Glass vessels, permeability of (BERTHELOT), A., ii, 443, 810.
testing, as to neutrality (BARONI), A., ii, 198.
Glauberite, formation of (VAN'T HOFF), A., ii, 464.
Glauber's salt, temperatures of transformation of, into thenardite (VAN'T HOFF and MEYERHOFFER), A., ii, 175.
Glaucodote from Oregon (SCHALLER), A., ii, 725.
Gliadin from wheat (OSBORNE and HARRIS), A., ii, 194.
composition of (ABDERHALDEN and SAMUELY), A., i, 620.
Globulin from the Spanish chestnut (BARLOW), A., i, 397.
of albuminous urine (SIKES), A., ii, 843.
Glow discharge. See under Electrochemistry.
Glucinum (*beryllium*), atomic weight of (PARSONS), A., ii, 710.
complexity of (PARSONS), A., ii, 320.
Glucinum sulphates, hydrated (PARSONS), A., ii, 34.
Glucinum, separation of, from aluminium and iron (VAN OORDT), A., ii, 88.
Glucoside from *Sambucus nigra* (GUIGNARD), A., ii, 604: (BOURQUELOT and DANJOU), A., ii, 605; (GUIGNARD and HOUDAS), A., ii, 648.
from the leaves of *Thalictrum aquilegifolium* (VAN ITALLIE), A., ii, 852.
Glucosides, formation of isodynamic, with reference to the theory of isomeric change and the selective action of enzymes (ARMSTRONG and COURTAULD), A., i, 746.
cyanogenetic, from the leaves of the cherry-laurel and from the bark of the bird-cherry (JOUCK), A., i, 912.
nature of the sugars of certain (TER MEULEN), A., i, 803.
Glucosides. See also:—
Amygdalin.
Anthraglucoside.
Apigenin.
Aucubin.
Cerebron.
Digitonin.
Emodin.
Fisetin.
Géin.
Gentiamarin.
Gentiin.
Gentiopicrin.
Gynocardin.
Indican.
Linin.
Nataloe-emodin.
Quercitrin.
Rhaponticin.
Sambunigrin.
Saponins.
Solanin.
Glucose. See Dextrose.
Glucosone, preparation of (MORRELL and BELLARS), T., 290; P., 80.
Glucothionic acid, distribution of, in the organism (MANDEL and LEVENE), A., ii, 736.

Glutaconaldehyde, α-chloro- (DIECKMANN), A., i, 411.
Glutaconic acid, constitution of (THORPE), T., 1669; P., 239.
and its anhydride and decomposition products (PERKIN and TATTERSALL), T., 361; P., 90.
alkyl derivatives of (ROGERSON and THORPE), T., 1685; P., 239.
Glutaric acid, conversion of, into cyclopropanedicarboxylic acid (PERKIN and TATTERSALL), T., 361; P., 90.
Glutaric acid, *di*hydroxy-derivatives, and their metallic and quinine salts (KILIANI and LOEFFLER), A., i, 858.
*αγ-di*hydroxy-, and its salts and lactone (KILIANI and HEROLD), A., i, 740.
Gluten, estimation of (FLEURENT), A., ii, 215.
influence of bran on the estimation of (LINDET and AMMANN), A., ii, 780.
Glutinase and **Antiglutinase** (POLLAK), A., ii, 47.
Glutokyrine, reactions of (SIEGFRIED), A., i, 105.
Glyceria fluitans, an almost forgotten cereal (HARTWICH and HÅKANSON), A., ii, 854.
Glyceric acid, configuration of (NEUBERG and SILBERMANN), A., i, 408.
i-**Glyceric acid**, resolution of, by fermentation and by brucine (FRANKLAND and DONE), T., 618; P., 132.
Glycerides, solubility of, in acetic acid (HOTON), A., ii, 426.
Glycerol and its di- and tri-*p*-nitrobenzoates (NEF), A., i, 7.
nitrogenous impurities of (SCHMITT), A., ii, 769.
esterification of (GUÉDRAS), A., i, 404.
acetyl derivatives. See Acetin, Diacetin, and Triacetin.
α-monochlorohydrin, reactions of, with magnesium organic compounds (GRIGNARD), A., i, 594.
assay of (TAUREL), A., ii, 121.
comparative estimations of (SCHULTZE), A., ii, 769.
direct estimation of (SHUKOFF and SCHESTAKOFF), A., ii, 289.
estimation of, by the extraction method (LANDSBERGER), A., ii, 558.
estimation of, in its solutions by means of the specific gravity (STIEPEL), A., ii, 121.
estimation of, in soap-lyes (BRAUN), A., ii, 616; (STRAUSS), A., ii, 865.
estimation of, in wines (LABORDE), A., ii, 768; (ROCQUES), A., ii, 769.
Glycerols, dissociation of (NEF), A., i, 3.
Glycerylphosphoric acid, alkaloidal salts (CARRÉ), A., i, 815.
Glycerylphosphoric acids, natural and synthetical, relation between (POWER and TUTIN), T., 249; P., 72.
Glycide and its ether and nitrate (NEF), A., i, 4.
Glycidic acid, disubstituted, ethyl esters, boiling points of (DARZENS), A., i, 117.
Glycine (*aminoacetic acid*, *glycocine*), synthesis of (SÖRENSEN), A., i, 749.
electrolysis of (KÜHLING), A., i, 417.
action of 1-bromo-2:4-dinitrobenzene on (SANNA), A., i, 48.
condensation of, with *o*-methoxybenzaldehyde (ERLENMEYER and BADE), A., i, 131.
N-acyl derivatives (FISCHER and KOENIGS), A., i, 31.
α-amino- and α-bromo-butyryl derivatives (FISCHER and RASKE), A., i, 693.
α-bromoisohexoyl derivative (FISCHER and BRUNNER), A., i, 690.
α-bromopropionyl derivative, and its ethyl ester (FISCHER), A., i, 688; (FISCHER and WARBURG), A., i, 692.
Glycine, copper salt (LEY), A., i, 175; (BRUNI), A., i, 263.
metastable state in the reaction between dry ammonia gas and (LEY and WIEGNER), A., i, 749.
Glycine, ethyl ester, physical constants of (SCHMIDT), A., i, 213.
condensation of, with esters (DIELS and HEINTZEL), A., i, 174.
action of magnesium phenyl bromide on (PAAL and WEIDENKAFF), A., i, 436.
Glycocyamine and **Glycocyamidine** and their additive salts (KORNDÖRFER), A., i, 29.
Glycogen (GRUBE), A., ii, 334.
production and utilisation of, by lower vegetable organisms (HEINZE), A., ii, 344.
physiology of (ADAMOFF), A., ii, 181.
hydrolysis of hepatic, produced by injection of amylase into the portal vein (PARISET), A., ii, 265.
effect of dextrose and certain salts on the rate of transformation of, into dextrose (NEILSON and TERRY), A., ii, 736.
Glycol. See Ethylene glycol.
Glycol, $C_6H_{14}O_2$, action of dilute sulphuric acid on (MUNK), A., i, 559.

Glycol, $C_{10}H_{18}O_2$, from phellandrene (WALLACH), A., i, 710.
$C_{10}H_{20}O_2$, from 3:8-diaminomenthane (SEMMLER), A., i, 222.
Glycols, formation of (BOUVEAULT and BLANC), A., i, 12.
dissociation of (NEF), A., i, 3.
normal diprimary, synthesis of (HAMONET), A., i, 403.
fusibility in the series of (HENRY), A., i, 254.
α-disecondary, preparation of (BOUVEAULT and LOCQUIN), A., i, 561, 573.
Glycollaldehyde, formation of (FENTON), T., 817; P., 168.
Glycollic acid derivatives of pyrogallol and its alkyl ethers (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 135.
Glycollic *p*-bromoanilide (DIMROTH and STAHL), A., i, 386.
Glycolphosphoric acid, alkaloidal salts of (CARRÉ), A., i, 815.
Glycoluril (FENTON), T., 815; P., 168; A., i, 267.
condensation products of, with formaldehyde (BEHREND, MEYER, and RUSCHE), A., i, 419.
Glycolyldicarbamide (EPPINGER), A., ii, 336.
Glycolysis and pancreas (CLAUS and EMBDEN), A., ii, 179, 404; (COHNHEIM), A., ii, 267.
in the capillaries, influence of local temperature on (LÉPINE and BOULUD), A., ii, 46.
Glycosuria. See Diabetes.
Glycuronic acid of blood (LÉPINE and BOULUD), A., ii, 730.
action of *p*-nitrophenylhydrazine on (MEDVEDEFF), A., i, 491, 612.
new reactions and derivatives of (NEUBERG and NEIMANN), A., i, 411.
estimation of (TOLLENS), A., ii, 559; (NEUBERG), A., ii, 658.
Glycuronic acids, condensed, synthesis of (NEUBERG and NEIMANN), A., i, 412.
estimation of (NEUBERG and NEIMANN), A., ii, 426.
conjugated, in bile (BIAL), A., ii, 643.
Glycurovanillic acid (KOTAKE), A., ii, 645.
Glycylglycine, oxidation products of (POLLAK), A., i, 750.
Glycyl-leucine and **-leucylalanine** (FISCHER and WARBURG), A., i, 691.
Glyoxalines (*iminazoles*) (PINNER), A., i, 476.
action of diazonium compounds on (PAULY), A., i, 494.
Glyoxaline-4-propionic acid and its salts (KNOOP and WINDAUS), A., i, 834.
Glyoxalosotetrazone, formation of (DIECKMANN and PLATZ), A., i, 953.
Glyoximines, metallic derivatives of (TSCHUGAEFF), A., i, 743.
Glyoxylic acid, fate of, in the organism (EPPINGER), A., ii, 543.
detection of, in urine (EPPINGER), A., ii, 543.
Glyoxylic acid, *o*-bromo-, *o*-iodo-, and *o*- and *p*-nitro-phenylhydrazones of, and their salts (BUSCH and WOLBRING), A., i, 493.
Goats' milk. See Milk.
Gold in sea water (DE WILDE), A., ii, 532.
supposed allotropy of (VAN HETEREN), A., ii, 260.
melting point of (GUERTLER and TAMMANN), A., ii, 93.
melting of, and expansion of some gases at high temperatures (JAQUEROD and PERROT), A., ii, 627, 720.
red colloidal solutions of (DONAU), A., ii, 462.
hydrosols (VANINO), A., ii, 171.
action of hydrochloric acid on (BERTHELOT), A., ii, 3.
metallic, and its solutions, behaviour of vanadium compounds towards (HUNDESHAGEN), A., ii, 639.
Gold compounds with organic sulphur compounds (HERRMANN), A., i, 733.
Gold alloys with lead (VOGEL), A., ii, 462.
with nickel (LEVIN), A., ii, 532.
with thallium (LEVIN), A., ii, 463.
with tin (VOGEL), A., ii, 640.
Gold *mono*iodide (*aurous iodide*), preparation of (MEYER), A., ii, 42.
*mono*xide (*aurous oxide*), supposed solubility of, in water (VANINO), A., ii, 172.
Gold, precipitation of, in the crystalline form (DYKES), A., ii, 396.
estimation of, by means of magnesium (FAKTOR), A., ii, 485.
estimation and separation of, electrolytically (MILLER), A., ii, 67.
quantitative separation of, from other metals by hydrazine or hydroxylamine salts (JANNASCH and v. MAYER), A., ii, 557.
Gout (KIONKA; FREY), A., ii, 742.
Grain, dampness of (HOFFMANN), A., ii, 753.
Grape stones, estimation of lecithin in (MURARO), A., ii, 564.
Graphite from Moravia (KOVÁŘ), A., ii, 173.

Graphite, specific heat of, at low temperatures (DEWAR), A., ii, 801.
Gravel, intestinal, analysis of an (CHAPUS), A., ii, 272.
Grignard's reaction (v. BAEYER), A., i, 766.
theory of, and preparation of organomagnesium compounds (TSCHELINZEFF), A., i, 40.
See also Magnesium organic compounds.
Guaiacol chlorocarbonate, reaction of, with acetylphenylthiocarbamide (DORAN and DIXON), T., 343; P., 78.
Guaiacolsulphonic acid, action of dilute nitric acid on (KÜHLING), A., i, 888.
Guaiacum reaction, the mechanism of the (NEUMANN-WENDER), A., ii, 199.
is the presence of a catalase necessary for the (L. and P. LIEBERMANN), A., i, 956.
Guaiacum resin, reactions of (PETIT and MAYER), A., i, 655.
Guanase (SCHITTENHELM), A., i, 108; ii, 645; (SCHENCK), A., ii, 266; (JONES and WINTERNITZ), A., ii, 334; (JONES), A., ii, 644.
occurrence of, in the spleen of oxen and its non-occurrence in the spleen of pigs (JONES), A., ii, 644.
Guanazine. See Hexahydrotetrazine, *p-di*imino-..
Guanidine, condensation of, with ethyl succinylsuccinate (BOGERT and DOX), A., i, 841.
some compounds of, with sugars (MORRELL and BELLARS), A., i, 577.
cadmium chloride (SCHENCK), A., i, 28.
picrolonate (SCHENCK), A., i, 513.
Guanidine, *di*amino-, and its hydrochloride (STOLLÉ and HOFMANN), A., i, 28; (PELLIZZARI and CANTONI), A., i, 174.
and its dibenzylidene derivative and their additive salts (PELLIZZARI and CANTONI), A., i, 576.
cyano-. See Dicyanodiamide.
*di*hydroxy-, hydrobromide of (WIELAND), A., i, 420.
β-Guanidopropionic acid. See β-Alacreatine.
Guanine, behaviour of, in the rabbit (SCHITTENHELM and BENDIX), A., ii, 188.
Guanineacetic acid. See Glycocyamine.
Guinafluavils, α- and β-, and α- and β-**Guinafluaviloresinols** (TSCHIRCH and MÜLLER), A., i, 452.
Guinalbans, α-, β-, and γ-, **Guinalbanan**, **Guinagutta**, β- and γ-**Guinalbaresinols** (TSCHIRCH and MÜLLER), A., i, 452.
Gum, chicle (TSCHIRCH and SCHERESCHEWSKI), A., i, 685.
Gums, nitrogen in (STEVENS), A., i, 574.
Gun-cotton, apparatus for carrying out the "stability test" for (HODGKINSON and COOTE), A., ii, 488.
Gunpowder, English, composition of an ancient (DESVERGNES), A., ii, 317.
Gutta-percha from German New Guinea (TSCHIRCH and MÜLLER), A., i, 452.
from Sumatra (TSCHIRCH and MÜLLER), A., i, 453.
Surinam. See Balata.
detection and estimation of bitumen in (PONTIO), A., ii, 362.
Gutta-percha-like substance from the resin of the Karite tree (FRANK and MARCKWALD), A., i, 293.
Gynocardase (POWER and LEES), T., 351; P., 89; (POWER and BARROWCLIFF), T., 897; P., 177.
Gynocardia odorata, constituents of the seeds of (POWER and LEES), T., 349; P., 88; (POWER and BARROWCLIFF), T., 896; P., 176.
amount of hydrogen cyanide in the seeds of (GRESHOFF), A., ii, 276.
Gynocardin and its hepta-acetyl derivative (POWER and LEES), T., 349; P., 88; (POWER and BARROWCLIFF), T., 897; P., 177.
Gynocardinic acid and its barium salt (POWER and LEES), T., 351; P., 89.
Gypsum, hydration of Portland cement and, in relation to the solubility of calcium sulphate (ROHLAND), A., ii, 319.
solubility of, as affected by size of particles and by different crystallographic surfaces (HULETT), A., ii, 247.
See also Calcium sulphate.
Gyrolite from California (SCHALLER), A., ii, 724.

H.

Hæmase, effect of poisons on the rate of decomposition of hydrogen peroxide by (SENTER), A., i, 107; ii, 380.
Hæmatic acids (KÜSTER), A., i, 622.
Hæmatin (KÜSTER), A., i, 622.
reduced acid (MILROY), A., i, 400.
Hæmatogen (HUGOUNENQ and MOREL), A., i, 556.

Hæmatoporphyrin, spectroscopic characters of (SCHULZ), A., i, 252.
oxidation of (KÜSTER), A., i, 623.
Hæmatoxylin and brazilin (HERZIG and POLLAK), A., i, 605.
condensation product from formaldehyde and (LEPETIT), A., i, 148.
Hæmochromogen, combination of, with carbon monoxide (v. HÜFNER and KÜSTER), A., i, 252.
Hæmocyanin and its hydrolysis (HENZE), A., i, 164.
Hæmoglobin, constitution of (TARUGI), A., i, 177.
action of chloroform on (EDIE), A., i, 397.
See also Methæmoglobin and Oxyhæmoglobin.
Hæmoglobin solutions, osmotic pressure of (REID), A., i, 846.
Hæmolysis, physico-chemical researches on (HENRI), A., ii, 265; (CERNOVODEANU), A., ii, 465.
influence of the concentration of blood corpuscles and the form of the reagent vessel on, by chemical reagents (VANDEVELDE), A., ii, 836.
composition of the stroma of blood-discs and (PASCUCCI), A., ii, 729.
Hæmolytic action of photodynamic substances (SACHAROW and SACHS), A., ii, 465.
Hæmolytic sera, chemical combination and toxic action as exemplified in (MUIR and BROWNING), A., ii, 107.
Hæmopyrrole, attempted synthesis of (TSCHUGAEFF and SCHLOESINGER), A., i, 231; (BURACZEWSKI and MARCHLEWSKI), A., i, 399.
Hæmopyrroledisazobenzene hydrochloride (GOLDMANN and MARCHLEWSKI), A., i, 399; (GOLDMANN, HEPTER, and MARCHLEWSKI), A., i, 725.
Hagemann's ester, constitution of (RABE and RAHM), A., i, 348.
Haidingerites, barium- and strontium-, artificial production of (DE SCHULTEN), A., ii, 174.
Hailstones, radioactivity of (JAUFMANN), A., ii, 663.
Halogen compounds, heats of combustion and formation of (THOMSEN), A., ii, 438, 572.
action of persulphates on (DITTRICH and BOLLENBACH), A., ii, 239.
organic, action of metallic cyanides on (SIDGWICK), P., 120.
Halogen hydrides as conducting solvents (STEELE; STEELE, MCINTOSH, and ARCHIBALD), A., ii, 222.
Halogens, removal of, from the benzene nucleus by the action of sodium and ethyl alcohol (STEPANOFF), A., i, 335.
estimation of, in mercury compounds (FISCHER), A., ii, 350.
estimation of, in organic substances (SADTLER), A., ii, 760.
Halphen's reaction (FISCHER and PEYAU), A., ii, 213.
Harmaline and **Harmine** (FISCHER and BUCK), A., i, 229.
*apo***Harmine** and amino- and nitro-, and its **carboxylic acid** and their additive salts (FISCHER and BUCK), A., i, 229.
Harmine-*N*-sulphonic acid (FISCHER and BUCK), A., i, 229.
Hay, weathered (SUTHERST), A., ii, 649.
Heart, effect of injections of potassium salts on the (HALD), A., ii, 836.
lecithin in the (RUBOW), A., ii, 336.
action of chloroform on the (SCHÄFER and SCHARLIEB), A., ii, 105.
mammalian, poisons applied to the outer surface of the (BALDONI), A., ii, 338.
See also Circulation.
Heat. See under Thermochemistry.
Helium, absence of, from carnotite (ADAMS), A., ii, 329.
state in which, exists in pitchblende (MOSS), A., ii, 520.
recognition of, from radium bromide (GIESEL), A., ii, 496.
in the waters of thermal springs (MOUREU), A., ii, 5.
use of, as thermometric substance, and its diffusion through quartz (JAQUEROD and PERROT), A., ii, 10.
determination of the amount of, in atmospheric air (TSCHERMAK), A., ii, 817.
Hemimellitic acid (*benzene*-1:2:3-*tricarboxylic acid*), esterification of (MEYER), A., i, 137.
Hemisparteilene (MOUREU and VALEUR), A., i, 716.
Hens' eggs. See Eggs.
Heptadecoic acid, natural (HOLDE, UBBELOHDE, and MARCUSSON), A., i, 318.
Heptamethylenediamine, synthesis of, and its benzenesulphonic derivatives (v. BRAUN and MÜLLER), A., i, 636.
Heptanaphthene. See Methyl*cyclo*hexane.
Heptane. See *ββ*-Dimethylpentane.
Heptane, amino-. See Heptylamine.
*di*amino-. See Heptamethylenediamine.

Heptane, $\alpha\eta$-*di*chloro- (v. BRAUN and MÜLLER), A., i, 635.

Heptanedicarboxylic acids. See Azelaic acid, Butylglutaric acids, $\alpha\gamma$-Diethylglutaric acid, α-Methyl-β-*iso*propylglutaric acid, and α-*iso*Propyladipic acid.

Heptane-$\alpha\alpha\gamma$-tricarboxylic acid (BLAISE and LUTTRINGER), A., i, 628.

Heptenoic acids. See Ethylallylacetic acid, δ-Methylhexenoic acids, and $\alpha\beta\gamma$-Trimethylcrotonic acid.

Heptenyl alcohol. See Dimethylbutenylcarbinol.

Heptinene. See Allyl*iso*propenylmethane.

Heptoic acid and its derivatives, physical properties of (LUMSDEN), T., 93; P., 14.

See also α-Ethylvaleric acid, α-Methylhexoic acid, and $\alpha\alpha\beta$-Trimethylbutyric acid.

n-**Heptonitrile** (HENRY), A., i, 561.

α-**Heptylacrylic acid** and its ethyl ester and potassium salt (BLAISE and LUTTRINGER), A., i, 628.

Heptylamine, η-chloro-, and its benzoyl derivative and additive salts (v. BRAUN and MÜLLER), A., i, 635.

Heptylene glycols. See Dimethylpentane-$\beta\delta$-diols.

α-**Heptylhydracrylic acid** and its potassium salt, ethyl ester, and phenylurethane (BLAISE and LUTTRINGER), A., i, 506.

Herb Bennett root, source and composition of the essential oil of (BOURQUELOT and HÉRISSEY), A., ii, 345.

Heterocyclic compounds, formation of, from hydrazine derivatives (STOLLÉ and MÜNCH), A., i, 94; (STOLLÉ and KIND), A., i, 96; (STOLLÉ, MÜNCH, and KIND), A., i, 97; (STOLLÉ), A., i, 249.

Hexadiene. See Diallyl.

Hexahydroanthrone and its semicarbazone and dibromo-derivative (GODCHOT), A., i, 201.

Hexahydrobenzoic acid. See *cyclo*Hexanecarboxylic acid.

Hexahydrobenzyl chloride. See Methyl*cyclo*hexane, ω-chloro-.

Hexahydro-β-collidine and its additive salts, oxalate, and hydrogen tartrate, and *di*bromo-, hydrobromide of (KOENIGS and BERNHART), A., i, 824.

Hexahydrocymene. See *p*-Menthane.

Hexahydrometanicotine (MAASS), A., i, 543.

Hexahydrophenanthrene and its picrate and bromo-derivatives (BRETEAU), A., i, 338.

Hexahydro*iso*phthalic acid, 2- and 4-*mono*- and 2:3- and 3:4-*di*-bromo- (PERKIN and PICKLES), T., 304; P., 76.

trans-**Hexahydro*iso*phthalic acid**, 1-*mono*- and 1:3-*di*-bromo- and 1-hydroxy- (GOODWIN and PERKIN), T., 850; P., 187.

Hexahydro*iso*phthalic acids, *cis*- and *trans*-, preparation and separation of (GOODWIN and PERKIN), T., 841; P., 187.

4:5-*di*bromo- (PERKIN and PICKLES), T., 311; P., 76.

Hexahydrotetrazine, *p*-*di*imino- (*guanazine*), and its additive salts (PELLIZZARI and CANTONI), A., i, 577.

Hexahydrothymol. See Thymomenthol.

Hexahydro-*o*-toluic acid and α-bromo-, ethyl esters (KAY and PERKIN), T., 1071.

Hexahydro-*m*-toluic acid and its bromination and ethyl ester, and α-hydroxy-derivative (PERKIN and TATTERSALL), T., 1084.

Hexahydro-*p*-toluic acid, 2-*mono*- and 1:2-*di*-bromo- (PERKIN and PICKLES), T., 646.

Hexamethoxy-benzil mono-oximes and -hydrobenzoin and its diacetyl derivative (HEFFTER and CAPELLMANN), A., i, 877.

Hexamethoxydiphenyls, 2:3:4:2′:3′:4′- and 3:4:5:3′:4′:5′- (GRAEBE and SUTER), A., i, 703.

Hexamethylacridine dimagnesium alkyl iodides (SENIER, AUSTIN, and CLARKE), T., 1473; P., 228.

Hexamethyl*tri*aminotriphenylbenzylmethane and its hydriodide (FREUND and BECK), A., i, 159.

Hexamethylene-. See *cyclo*Hexane-.

Hexamethylene glycol and its derivatives (HAMONET), A., i, 403.

Hexamethylenediamine, synthesis of, and its additive salts (NEUBERG and NEIMANN), A., i, 686.

synthesis of, and its benzoyl and benzenesulphonic derivatives (v. BRAUN and MÜLLER), A., i, 636.

Hexamethyleneimine, synthesis of, and its additive salts, derivatives, and polymeride (v. BRAUN and STEINDORFF), A., i, 826.

Hexamethylenetetramine. See Urotropine.

Hexane, amino-. See Hexylamine.

$\alpha\zeta$-*di*amino-. See Hexamethylenediamine.

$\alpha\zeta$-*di*chloro- (v. BRAUN and MÜLLER), A., i, 635.

nitro- (HENRY), A., i, 561.

Hexane, *di*nitro-. See Methyl*tert.*-butyl-*di*nitromethane.

*iso***Hexanes** in Roumanian petroleum (PONI and COSTACHESCU), A., i, 109.

*cyclo***Hexane** derivatives (BRUNEL), A., i, 123, 268, 274, 340, 869; (FREUNDLER and DAMOND), A., i, 890.

*cyclo***Hexane**, *o*-bromoiodo- (BRUNEL), A., i, 869.

*cyclo***Hexanecarboxylic acid** (LUMSDEN), T., 87; P., 14.

and its derivatives, physical properties of (LUMSDEN), T., 91; P., 14.

and its ethyl ester and 1-bromo-derivative, preparation of (MATSUBARA and PERKIN), T., 663.

Hexanedicarboxylic acids. See Dimethyladipic acids, Ethylpropylmalonic acid, Methylbutylmalonic acid, α-Methyl-β-propylsuccinic acid, and *iso*Propylglutaric acids.

*cyclo***Hexanesulphonic acid** and its salts, ethyl ester, anilide, and chloride (BORSCHE and LANGE), A., i, 765.

*cyclo***Hexane-1:1:3:3-tetracarboxylic acid**, preparation of (GOODWIN and PERKIN), T., 846.

*cyclo***Hexanol**, preparation of (HOLLEMAN, VAN DER LAAN, and SLIJPER), A., i, 443.

ethers and esters of (BRUNEL), A., i, 274.

2-iodo-, esters of (BRUNEL), A., i, 123, 340, 869.

*cyclo***Hexanone**, preparation of (HOLLEMAN, VAN DER LAAN, and SLIJPER), A., i, 443.

3-*cyclo***Hexanonecarboxylic acid** and its oxime (GOODWIN and PERKIN), T., 852; P., 187.

4-*cyclo***Hexanonecarboxylic acid** and its salts and semicarbazone (LUMSDEN), T., 87; P., 14.

Hexaphenylethane, Ullmann and Borsum's (TSCHITSCHIBABIN), A., i, 125; (JACOBSON), A., i, 186.

*cyclo***Hexene** (*tetrahydrobenzene*), preparation of (HOLLEMAN, VAN DER LAAN, and SLIJPER), A., i, 444.

preparation of, from cyclohexanol (BRUNEL), A., i, 268.

new additive products of (BRUNEL), A., i, 123, 340.

Δ²-*cyclo***Hexenol** (BRUNEL), A., i, 869.

*cyclo***Hexenonecarboxylic acids**, esters, constitution of (MERLING, WELDE, and SKITA), A., i, 349.

Hexenoylalanine (FISCHER and WARBURG), A., i, 691.

***n*-Hexoic acid**, derivatives of (HENRY), A., i, 561.

α-amino-. See Leucine.

*iso***Hexoic acid**, ethyl ester, α-carbamide of (BOUVEAULT and LOCQUIN), A., i, 33.

*iso***Hexoic acid**, α-hydroxy-, ethyl ester (BOUVEAULT and LOCQUIN), A., i, 32.

Hexoic acids. See also αα-Dimethylbutyric acid, α-Ethylbutyric acid, and β-Methylvaleric acid.

Hexone bases of liver tissue (WAKEMAN), A., ii, 467, 841.

***n*-Hexonitrile** (HENRY), A., i, 561.

ε-amino-, *N*-benzoyl derivative of (v. BRAUN and STEINDORFF), A., i, 206.

Hexonoin, derivatives of (BOUVEAULT and LOCQUIN), A., i, 572.

*iso***Hexoyl chloride**, α-bromo- (FISCHER and KOENIGS), A., i, 31.

*iso***Hexoyldiglycylglycine**, α-bromo-, and its ethyl ester (FISCHER and REUTER), A., i, 264.

Hexyl acetate, *penta*bromo- (PERKIN and SIMONSEN), T., 857; P., 189.

***n*-Hexyl chloride, mercaptan, and nitrite** (HENRY), A., i, 561.

Hexyl iodide from mannitol, constitution of (RASETTI), A., i, 558.

*cyclo***Hexyl hydrosulphide** (BORSCHE and LANGE), A., i, 766.

*cyclo***Hexyl-acetic acid** and α-cyano-, and **-malonic acid** and their ethyl esters (FREUNDLER and DAMOND), A., i, 890.

Hexylamine, ζ-bromo- and its additive salts, and ζ-chloro- (v. BRAUN and STEINDORFF), A., i, 827.

ζ-chloro-, and its additive salts (v. BRAUN and MÜLLER), A., i, 635.

See also 3-Methylpentane, α-amino-.

β-*iso***Hexylamine**, hydroxy-, and its oxidation, and condensation with aldehydes (KOHN), A., i, 929.

Hexylene *di*bromide (b.p.$_{17}$ 91°), action of water on (KLARFELD), A., i, 166.

Hexylenedicarboxylic acids. See Methylethylglutaconic acid and αβγ-Trimethylglutaconic acid.

β-Hexylglutaric acid, αγ-*di*cyano- (KNOEVENAGEL), A., i, 169.

Hexylidenediacetamide (REICH), A., i, 35.

Hippuric acid, synthesis of, in the organism (WIECHOWSKI), A., ii, 846.

condensation of, with aldehydes (ERLENMEYER and MATTER; ERLENMEYER and STADLIN), A., i, 238; (ERLENMEYER and WITTENBERG), A., i, 240.

condensation of, with pyruvic acid (ERLENMEYER and ARBENZ), A., i, 240.

Hippuric acid, ethyl ester (ERLENMEYER and STOOP), A., i, 120.
Hippuryl chloride (FISCHER and REUTER), A., i, 264.
action of, on polyhydric phenols (FISCHER), A., i, 892.
Hippurylazo-4-hydroxy-benzene, -3-methylbenzene, -2-methyl-5-*iso*propylbenzene, and **-naphthalene** (BORSCHE and OCKINGA), A., i, 719.
2-Hippurylazo-1-hydroxynaphthalene (BORSCHE and OCKINGA), A., i, 719.
Hirudin (BODONG), A., ii, 339.
Histidine, constitution of (KNOOP and WINDAUS), A., i, 834.
cadmium chloride (SCHENCK), A., i, 28.
picrolonate (STEUDEL), A., i, 462.
Histidine anhydride (FISCHER and SUZUKI), A., i, 121.
Histological methods (MOSSE), A., ii, 182.
Hofmann's reaction (MOHR), A., i, 890.
Homoanthranilonitrile. See *p*-Toluonitrile, 3-amino-.
Homohydroxysalicylic acid, oxidation of (DUREGGER), A., i, 702.
Homologous compounds, boiling points of (YOUNG), A., ii, 231.
series, regularities in (BIACH), A., ii, 75.
rotatory power in (MINGUIN), A., ii, 130.
Honduresen, Honduresinol, and **Honduresinotannol** and its acetyl derivative (HARTWICH and HELLSTRÖM), A., i, 454.
Hopeite, artificial production of (DE SCHULTEN), A., ii, 174.
Hops, analysis of, as an aid in estimating the manurial requirements (SCHNEIDER), A., ii, 755.
Hornblende from Bohemia (BARVÍŘ), A., ii, 176.
Horse, influence of movements of the body on the digestion and absorption of food-stuffs in the (SCHEUNERT), A., ii, 733.
Humic acid and bromo- and nitro- (MALKOMESIUS and ALBERT), A., i, 119.
Humic acids of grey sand and brown sandstone (MAYER), A., ii, 55.
Humic substances, insoluble alkaline compounds formed by (BERTHELOT), A., ii, 759.
agricultural value of (DUMONT), A., ii, 196.
Hunger, proteid decomposition and acidosis in extreme (BRUGSCH), A., ii, 404.
Hureaulite, artificial production of (DE SCHULTEN), A., ii, 175.
Hydantoamide (EPPINGER), A., ii, 336.
Hydantoins, thio-. See Thiohydantoins.
Hydnocarpic acid and its esters, silver salt, and amide (POWER and BARROWCLIFF), T., 888; P., 176.
Hydnocarpus anthelminthicus and *H. Wightiana*, constituents of the seeds of (POWER and BARROWCLIFF), T., 884; P., 175.
Hydracrylaldehyde, semicarbazone of (NEF), A., i, 4.
Hydrate isomerism, new case of (WERNER and GRÜN), A., ii, 93.
Hydrates in solution (LEWIS), A., ii, 509.
theory of the existence of, influence of temperature on the amount of water of crystallisation as evidence supporting the (JONES and BASSETT), A., ii, 509.
approximate composition of the, formed by certain electrolytes in aqueous solutions at different concentrations (JONES and BASSETT), A., ii, 445, 687.
Hydration and colour (DONNAN), A., ii, 806.
Hydratropaldehyde and its semicarbazone and imino-derivative (CLAISEN), A., i, 287.
formation of, from phenylmethylethylene oxide, and its benzhydrazone and *m*-nitrobenzhydrazone (KLAGES; TIFFENEAU), A., i, 523.
Hydrazides, estimation of certain (MASELLI), A., ii, 560.
of aromatic substituted carbamic acids from semicarbazide, preparation of (BORSCHE), A., i, 305.
Hydrazine, new synthesis of (SCHESTAKOFF), A., i, 332.
action of cyanogen bromide on (PELLIZZARI and CANTONI), A., i, 576.
derivatives, formation of heterocyclic compounds from (STOLLÉ and MÜNCH), A., i, 94; (STOLLÉ and KIND), A., i, 96; (STOLLÉ, MÜNCH, and KIND), A., i, 97; (STOLLÉ), A., i, 249.
platinocyanide (LEVY and SISSON), P., 305.
Hydrazine group, replacement of the hydroxyl group by the (FRANZEN), A., i, 244.
Hydrazine salts, action of magnesium alkyl haloids on (HOUBEN), A., i, 873.

Hydrazines, two new methods of preparing (FRANZEN), A., i, 244.
Hydrazinecarboxylic acid and its hydrazine salt (STOLLÉ and HOFMANN), A., i, 28.
Hydrazine-mono- and -di-sulphonic acids (STOLLÉ and HOFMANN), A., i, 28.
Hydrazodicarbonamide (WIELAND), A., i, 421.
Hydrazones, isodynamic, solubility as a measure of the change undergone by (ROBERTSON), T., 1298; P., 181.
mutual replacement of sugar residues in (VOTOČEK and VONDRÁČEK), A., i, 377.
reduction of (FRANZEN), A., i, 427, 830.
Hydrides of metalloids of the first three families, properties of (DE FORCRAND), A., ii, 696.
See also under the separate Metals and Metalloids.
Hydriodic acid. See under Iodine.
Hydrizino-halides from oxalic acid (BOWACK and LAPWORTH), T., 1854; P., 257.
Hydrobenzoin, tetra-acetyl derivatives (ZINCKE and MÜNCH), A., i, 56.
di-p-hydroxy-, dimethyl ether of, its diacetyl derivative (ZINCKE and MÜNCH), A., i, 55.
*iso***Hydrobenzoin**, *di-p*-hydroxy-, and its diacetyl derivative (ZINCKE and MÜNCH), A., i, 55.
Hydrocarbon, C_6H_{10}, from the glycol $C_6H_{14}O_2$ (MUNK), A., i, 559.
C_7H_{12}, from cyclobutyldimethylcarbinol (KIJNER), A., i, 772.
C_8H_{14}, from methylheptenylamine (WALLACH), A., i, 818.
C_9H_{16}, and C_9H_{18}, from cyclobutyldiethylcarbinol (KIJNER and AMOSOFF), A., i, 772.
$C_{10}H_{18}$, from the action of dilute sulphuric acid on propionepinacone (KOHN), A., i, 167.
$C_{11}H_{10}$, from phenylacetylenyldimethylcarbinol (SKOSSAREWSKY), A., i, 774.
$C_{12}H_{12}$, from phenylacetylenylmethylethylcarbinol (BORK), A., i, 774.
$C_{13}H_{14}$, from phenylacetylenylmethylisopropylcarbinol (BORK), A., i, 774.
$C_{14}H_{16}$, from phenylacetylenylmethyl-*tert.*-butylcarbinol (NEWEROWITSCH), A., i, 775.
$C_{15}H_{14}$, from the substance, $C_{16}H_{10}O_6$ (DUREGGER), A., i, 702.
$C_{15}H_{16}$, from the alcohol, $C_{15}H_{18}O$ (BERTROND), A., i, 775.
Hydrocarbon substances of organic origin, changes effected by time on (BERTHELOT), A., i, 169, 501.
Hydrocarbons from various petroleums (MABERY; MABERY and PALM; MABERY and SIEPLEIN), A., i, 313.
in Louisiana petroleum (COATES and BEST), A., i, 833.
new formation of (HOUBEN), A., i, 873.
formation of, by means of the xanthogen reaction (TSCHUGAEFF), A., i, 71.
formation of, by the hydrogenation of aromatic nitriles (SABATIER and SENDERENS), A., i, 268.
formation of, from thiopinacones (MANCHOT and KRISCHE), A., i, 142.
heats of combustion and formation of (LAGERLÖF), A., ii, 6, 76; (THOMSEN), A., ii, 231, 435, 572.
hydrogenation of, by means of finely divided metals (SABATIER and SENDERENS), A., i, 333.
aromatic, new method of synthesising (DARZENS), A., i, 66.
distribution of soluble substances between water and (HERZ and FISCHER), A., ii, 304.
oxidation of, by means of cerium peroxide (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 697.
condensation of, with chloral under the influence of aluminium chloride (DINESMANN), A., i, 645.
benzenoid, electrolytic oxidation of (LAW and PERKIN), A., i, 40.
fatty, preparation of (LEBEAU), A., i, 401.
saturated, nitrating action of nitric acid on (KONOWALOFF), A., i, 762; (GUREWITSCH; KONOWALOFF and JATZEWITSCH), A., i, 763; (KONOWALOFF and DOBROWOLSKY), A., i, 764.
unsaturated, addition of mercaptans to (POSNER and TSCHARNO), A., i, 279.
Hydrocarbons, *di*bromo-, action of ethyl sodioacetoacetate on (SOLONINA), A., i, 112.
See also Terpenes.
Hydrochloric acid. See under Chlorine.
Hydrocinnamic acid. See β-Phenylpropionic acid.
Hydrocotarnine and its relation to tarconine methiodide and cotarnine iodide (BRUNS), A., i, 370.
Hydrocotarnineacetic acid and its methyl ester (AHLERS), A., i, 785.
Hydrocuminylamine and its carbamide (WALLACH), A., i, 710.
Hydrocyanic acid. See under Cyanogen.
Hydroferrocyanic acid, compounds of, with sulphuric acid (CHRÉTIEN), A., i, 578.

Hydrofluoric acid. See under Fluorine.
Hydrofluosilicic acid. See under Fluorine.
Hydrogen, maximum value of the absolute weight of the atom of (SPRING), A., ii, 565.
atomic weight of (LEDUC), A., ii, 310.
atomic weight of, deduced from its density (GUYE), A., ii, 442.
valency of (DE FORCRAND), A., ii, 310.
apparatus for preparing (ARZBERGER), A., ii, 21 ; (ÜBEL), A., ii, 239.
liberation of, during the action of sodium on mercury (KAHLENBERG and SCHMIDT), A., ii, 387.
polarisation observed during the cathodic liberation of (TAFEL), A., ii, 223.
refractive index of, in the infra-red (KOCH), A., ii, 661.
rendering active of, by colloidal palladium (PAAL and AMBERGER), A., ii, 397, 533.
latent heat of vaporisation of (DEWAR), A., ii, 801.
nascent, diffusion of, through iron (WINKELMANN), A., ii, 682.
diffusion of, through palladium (RICHARDSON), A., ii, 233.
influence of temperature and pressure on the absorption and diffusion of, in palladium (WINKELMANN), A., ii, 397.
absorption of, by rhodium (QUENNESSEN), A., ii, 42.
combustion of, in air or oxygen and the reversal of the flame ; lecture experiment (LANG), A., ii, 810.
action of radium rays on mixtures of chlorine and (JORISSEN and RINGER), A., ii, 219.
cause of the period of induction in the union of chlorine and (CHAPMAN and BURGESS), A., ii, 236, 697.
union of, with oxygen at low pressure through the passage of electricity (KIRKBY), A., ii, 236.
union of, with oxygen at low pressures caused by the heating of platinum (KIRKBY), A., ii, 695.
reducing action of (CHAPMAN and LAW), A., ii, 695.
carbon, and nitrogen, estimation of, in cyanides (MULLER), A., ii, 767.
and carbon, estimation of, in organic compounds (PREGL), A., ii, 420.
Hydrogen antimonide. See Antimony hydride.
arsenide. See Arsenic *tri*hydride.
chloride. See under Chlorine.
cyanide. See under Cyanogen.
fluoride. See under Fluorine.
Hydrogen iodide. See under Iodine.
nitride. See Azoimide.
Hydrogen *per*oxide, preparation and therapeutic application of (JAUBERT), A., ii, 585.
supposed radioactivity of (PADOA), A., ii, 624.
radiation from (PRECHT and OTSUKI), A., ii, 296, 495.
catalytic decomposition of (BREDIG and WILKE), A., ii, 151 ; (LOEVENHART), A,, ii, 335.
rôle of diffusion in the catalysis of, by colloidal metals (SAND), A., ii, 233 ; (SENTER), A., ii, 379.
hydrolysis of, by catalase (BACH), A., i, 623.
decomposition of, by Boletus catalase (v. EULER), A., ii, 343.
effect of "poisons" on the rate of decomposition of, by hæmase (SENTER). A., i, 107 ; ii, 380.
effect of hypnotics and anti-pyretics on the rate of catalysis of, by kidney extract (NEILSON and TERRY), A., ii, 738.
action of, on carbohydrates in presence of ferrous sulphate (MORRELL and BELLARS), T., 280 ; P., 79.
action of, on milk (GORDAN), A., i, 108.
action of, on tellurium (GUTBIER and RESENSCHECK), A., ii, 24.
detection of, in milk (UTZ), A., ii, 415.
estimation of, colorimetrically (PLANÈS), A., ii, 199.
estimation of, in presence of potassium persulphate (FRIEND), T., 1367 ; P., 185.
Hydrogen phosphide. See Phosphorus hydride.
Hydrogen sulphide, formation of, by yeast (WILL and SCHÖLLHORN), A., ii, 547 ; (SCHANDER), A., ii, 647.
apparatus, new (FRISWELL), A., ii, 20 ; (ARZBERGER), A., ii, 21 ; (SCHRIMPFF), A., ii, 383 ; (ECKART), A., ii, 515 ; (BILTZ), A., ii, 651.
heats of combustion and formation of (THOMSEN), A., ii, 574.
liquid, as a solvent (ANTONY and MAGRI), A., ii, 446.
interaction of, with arsenic pentoxide in presence of hydrochloric acid (USHER and TRAVERS), T., 1370 ; P., 223.
action of, on selenious acid (GUTBIER and LOHMANN), A., ii, 84, 241.
action of, on sulphur dioxide (LANG and CARSON), P., 158.

Hydrogenation, use of finely divided metals in (SABATIER and SENDERENS), A., i, 333.
Hydrohæmin (ZALESKI), A., i, 106.
Hydrolysis. See under Affinity.
of sucrose. See Sucrose.
Hydronitric acid. See Azoimide.
Hydroxy-acid, $C_7H_{14}O_3$, from the aldol, $C_7H_{14}O_2$ (EHRENFREUND), A., i, 861.
$C_{10}H_{18}O_3$, from the aldol, $C_{10}H_{18}O_2$ (MORAWETZ), A., i, 262.
Hydroxy-acids, action of inorganic compounds on the rotation of (GROSSMANN), A., i, 861.
molecular transpositions and migration of the carboxyl group in the dehydration of certain (BLAISE and COURTOT), A., i, 853.
alkine esters of (CHININFABRIK BRAUNSCHWEIG; BUCHLER & Co.), A., i, 367.
esters, reduction of (BOUVEAULT and BLANC), A., i, 13.
γ-Hydroxy-acids, transformation of, with and without the addition of other acids, conceived as an ionic reaction (VISSER), A., ii, 511; (DE BRUYN), A., ii, 805.
mechanism of the reaction by which, are converted into lactones (DE BRUYN), A., ii, 805.
β-Hydroxyaldehydes, action of organomagnesium compounds on (FRANKE and KOHN), A., i, 111.
See also Aldols.
α-Hydroxycarboxylic acids, action of heat on (LE SUEUR), T., 1888; P., 285.
Hydroxy-compounds, colour reaction for (GUÉRIN), A., ii, 209.
aromatic, action of sulphites on (BUCHERER), A., i, 48; (BUCHERER and STOHMANN), A., i, 585.
See also under the parent Substance.
Hydroxylamine, reaction of, with cyanogen bromide (WIELAND), A., i, 420.
compounds of, with metallic haloids (ANTONOFF), A., ii, 709.
salts, action of potassium permanganate on (SIMON), A., ii, 242.
hydrochloride, equilibrium between acetone and (LANDRIEU), A., ii, 445.
platinocyanide (LEVY and SISSON), P., 305.
estimation of, volumetrically (STÄHLER), A., ii, 116; (SIMON), A., ii, 352.
Hydroxylamino-derivatives. See under the parent Substance.
Hydroxyl group, replacement of, by bromine (PERKIN and SIMONSEN), T., 855; P., 188.
replacement of, by the hydrazine group (FRANZEN), A., i, 244.
Hyoscines, physiological action of (CUSHNY and PEEBLES), A., ii, 545.
Hyoscyanine from Datura and *Atropa Belladonna* (SCHMIDT; KIRCHER), A., i, 717.
Hypochlorous acid. See under Chlorine.
Δ$^{\alpha}$-Hypogæic acid and its salts, amide, and dibromide (PONZIO), A., i, 406.
Hypoiodous acid. See under Iodine.
Hyposulphurous acid. See under Sulphur.

I.

Ice, specific heat of, at low temperatures (DEWAR), A., ii, 801.
d-**Iditol**. See Sorbieritol.
Idocrase from California (CLARKE and STEIGER), A., ii, 725.
Imide chlorides, action of potassium thiocyanate on (WHEELER and BRISTOL), A., i, 483.
Imides, electrolysis of (PANNAIN), A., i, 755.
organic, complex compounds of (TSCHUGAEFF), A., i, 865.
Iminazoles. See Glyoxalines.
Imines, condensation of, with aldehydes and ketones (MAYER), A., i, 214.
condensation of, with ketones and nitromethane (MAYER), A., i, 357.
Imino-ethers, reduction of (HENLE), A., i, 490.
Iminopyrine (MICHAELIS), A., i, 476.
Iminosulphonamide and its salts (HANTZSCH and STUER), A., ii, 312.
Iminothiodiazoline derivatives (WHEELER and STATIROPOULOS), A., i, 720.
*endo***Iminotriazoles** (BUSCH), A., i 307.
Inanition studies (SLOWTZOFF), A., ii 45.
Incandescent mantles. See Mantles.
Indaconine, identity of, with ψ-aconine, and its salts and the action of heat on (DUNSTAN and ANDREWS), T., 1628; P., 234.
Indaconitine, extraction of, from *Aconitum chasmanthum*, and its composition, properties, and salts (DUNSTAN and ANDREWS), T., 1620; P., 233.
Indanedione, derivatives of (ERRERA and CASARDI), A., i, 446.
Indanthrene, chloro- (BADISCHE ANILIN- & SODA-FABRIK), A., i, 158.

Indazole, 5:7-*di*nitro-, and its salts and acetyl derivative (ZINCKE and MALKOMESIUS), A., i, 487.
5:7-*di*nitro-6-amino- and 5:7-*di*nitro-6-hydroxy-, and their salts and diacetyl derivatives (ZINCKE and KUCHENBECKER), A., i, 488.
Indazoles (ZINCKE), A., i, 486.
Indazole-6-sulphonic acid, 5:7-*di*nitro-, and its salts (ZINCKE and KUCHENBECKER), A., i, 488.
Indbenzaconine and its properties and salts (DUNSTAN and ANDREWS), T., 1625; P., 234.
Indene, additive compounds of, with *s*-trinitrobenzene and picryl chloride (BRUNI and TORNANI), A., i, 269.
Indiarubber. See Caoutchouc.
Indican, estimation of, in urine by Meisling's colorimeter (OERUM), A., ii, 872.
Indicator, potassium bromide as, when using Fehling's solution (BERTI), A., ii, 57.
Indicators, theory of, and its bearing on the analysis of physiological solutions by means of volumetric methods (CLOWES), A., ii, 56.
Indigo, the chemistry of (BLOXAM), T., 974.
Indigotin from methyl dianilinomaleate (SALMONY and SIMONIS), A., i, 633.
oxidation of, by potassium permanganate, and its bromo-derivatives (CHOLIN), A., i, 350.
Indium fluoride (CHABRIÉ and BOUCHONNET), A., ii, 165.
Indole, action of sulphuryl chloride on (MAZZARA and BORGO), A., i, 925.
in the organism (GROSSER), A., ii, 470.
chloro-, action of bromine on (MAZZARA and BORGO), A., i, 925.
Indoles, formation of, from pyrrole (PLANCHER and CARAVAGGI), A., i, 298.
Indole colouring matters (FREUND and LEBACH), A., i, 663.
Indole-3-methylacetic acid (ELLINGER), A., i, 828.
Indole-3-propionic acid, synthesis of (ELLINGER), A., i, 827.
Indoline and its additive salts and 1-benzoyl and 1-nitroso-derivatives (PLANCHER and RAVENNA), A., i, 611.
Indoline bases, new (PLANGGER), A., i, 718; (PLANCHER and CARRASCO), A., i, 719.
Indolinones, transformation of, into alkyleneindolines (BRUNNER), A., i, 468.
Indone*cyclo*methylacetoethylene (RUHEMANN and MERRIMAN), T., 1392; P., 225.
Indophenol, blue, and its leuco-compound from *p*-phenylenediamine and *o*-acetylaminophenol (KALLE & Co.), A., i, 157.
derivatives from *p*-chlorophenol (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 530.
Indophenols, preparation of (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 468.
containing the sulphamino-group (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 934.
Indoxyl, urinary (GRIMBERT), A., ii, 48.
Indoxylic acid, derivatives of (CHEMISCHE FABRIK VON HEYDEN), A., i, 647.
Induction, period of, cause of the, in the union of hydrogen and chlorine (CHAPMAN and BURGESS), A., ii, 236, 697.
Infants, influence of carbohydrate diet on the composition of (STEINITZ and WEIGERT), A., ii, 180.
natural nourishment of (RUBNER and HEUBNER), A., ii, 403.
starch digestion in (CORLETTE), A., ii, 466.
Inorganic colloids. See Colloids.
salts, surface tension of solutions of (FORCH), A., ii, 681.
pyridine as a solvent and ionising medium for metallic (SCHROEDER), A., ii, 306.
Insects, melliferous, physiological significance of the urate cells in (SEMICHON), A., ii, 600.
Internal friction. See Viscosity.
Intestinal contents, normal, toxicity of the (MAGNUS-ALSLEBEN), A., ii, 746.
gravel. See Gravel.
Intestine, isolated small, of dogs and rabbits, action of certain poisons on (KRESS), A., ii, 847.
small, of rabbits, gaseous metabolism of (BOYCOTT), A., ii, 540.
surviving, experiments with the (MAGNUS), A., ii, 466; (LANGLEY and MAGNUS), A., ii, 733.
action of the mucous membrane of the, on fats, fatty acids, and soaps (FRANK and RITTER), A., ii, 733.
Intracranial vessels, contractility of (WIECHOWSKI), A., ii, 401.
Inversion of sucrose. See Sucrose.
Invertin in blood (WEINLAND), A., ii, 730.
Iodic acid. See under Iodine.

Iodide of starch, nature of (PADOA and SAVARÈ), A., i, 416.
Iodine, atomic weight of (KÖTHNER and AEUER), A., ii, 81, 156; (BAXTER), A., ii, 81, 579; (LADENBURG; KÖTHNER), A., ii, 310.
absorption spectra of (FRIEDERICHS), A., ii, 782.
distribution of, between two solvents (OSAKA), A., ii, 811.
Hydriodic acid (*hydrogen iodide*), action of oxidising agents on (SKRABAL), A., ii, 449.
Iodic acid and potassium iodate, solubility of, at 30° (MEERBURG), A., ii, 17.
as an oxidising agent (RUPP), A., ii, 417.
uses of, in volumetric analysis (SCHUMACHER and FEDER), A., ii, 856.
Periodic acid, basicity of (GIOLITTI), A., ii, 311.
Hypoiodous acid, reactions of (SKRABAL), A., ii, 449.
Iodine, estimation of, alkalimetrically (BARBIERI), A., ii, 350.
estimation of, volumetrically (HENNECKE; FRERICHS), A., ii, 281.
free, estimation of, in alkaline solutions (VAN DEVENTER), A., ii, 417.
estimation of, in iodates (JANNASCH and JAHN), A., ii, 416.
new method for the estimation of mixtures of chlorides, bromides, and (WENTZKI), A., ii, 478.
estimation of, in soluble iodides, and also in the presence of bromides and chlorides (DITZ and MARGOSCHES), A., ii, 59.
estimation of small proportions of bromine and chlorine in (TATLOCK and THOMSON), A., ii, 281.
Iodine value, the reactions concerned in the estimation of the (VAN LEENT), A., ii, 124.
Iodobromite in Arizona (BLAKE), A., ii, 262.
Iodoform, decomposition of, by the action of oxygen and light rays (VAN AUBEL), A., i, 1.
behaviour of, in the body (MULZER), A., ii, 409.
detection of (STORTENBEKER), A., ii, 424.
Iodogorgonic acid, synthesis of, and its salts and acetyl derivative (WHEELER and JAMIESON), A., i, 350.
Iodometry, benzene as indicator for (SCHWEZOFF), A., ii, 280; (MARGOSCHES), A., ii, 552.
Iodometry, sodium hydrogen carbonate in (PUCKNER), A., ii, 415.
ψ-Ionone and its derivatives, inversion of (ALEXANDER), A., i, 355.
Iridium, disintegration of, by carbon dioxide (EMICH), A., ii, 803.
hydrosol (GUTBIER and HOFMEIER), A., ii, 396.
Iridium *sesqui*sulphate and its alums (MARINO), A., ii, 43.
Iridium and platinum, separation of (QUENNESSEN), A., ii, 615.
Iris, paralysed, action of drugs on (ANDERSON), A., ii, 546.
Iron, electrolytic, new process for making (MAXIMOWITSCH), A., ii, 253.
enhanced lines of, in the Fraunhoferic spectrum (LOCKYER and BAXANDALL), A., ii, 69.
in isolated crystals, mechanical properties of (OSMOND and FRÉMONT), A., ii, 638.
effect of liquid air temperatures on the mechanical and other properties of (DEWAR and HADFIELD), A., ii, 229.
specific heat of, at high temperatures (HARKER), A., ii, 674.
diffusion of nascent hydrogen through (WINKELMANN), A., ii, 682.
rusting of (DUNSTAN, JOWETT, and GOULDING), T., 1548; P., 231; (DIVERS), P., 251.
stimulating and paralysing influences of certain substances in the production of rust on (LINDET), A., ii, 36.
reactions in the reduction of (SCHENCK and HELLER), A., ii, 526.
influence of nitrogen on (BRAUNE), A., ii, 638; (LE CHATELIER), A., ii, 639.
action of slightly alkaline waters on (CRIBB and ARNAUD), A., ii, 589.
in human milk (CAMERER), A., ii, 183.
in diabetic urine (ZUCCHI), A., ii, 469.
biological importance of (BALDONI), A., ii, 46.
absorption and excretion of, in dogs and cats (SATTLER), A., ii, 333.
Iron alloys, physical properties of (BARRETT, BROWN, and HADFIELD), A., ii, 503.
effect of liquid air temperatures on the mechanical and other properties of (DEWAR and HADFIELD), A., ii, 229.
with cobalt (GUERTLER and TAMMANN), A., ii, 528.

Iron alloys with cobalt and with nickel (GUERTLER and TAMMANN), A., ii, 528.
with copper and zinc, action of the atmosphere on (HABERMANN), A., ii, 693.
with manganese (LEVIN and TAMMANN), A., ii, 822.
with nickel, natural. See Awaruite and Souesite.
Iron compounds, new class of (HAUSER), A., ii, 715.
Iron salts, oxidation and reduction in the electrolysis of solutions of (KARAOGLANOFF), A., ii, 674.
Ferrides, preparation of (JÜNGST & MEWES), A., ii, 316.
Iron hydroxide, colloidal, obtained by electrodialysis, and some of its properties (TRIBOT and CHRÉTIEN), A., ii, 166.
nitride (BAUR and VOERMAN), A., ii, 715.
nitrosulphides (Roussin's salts) (BELLUCCI and VENDITORI), A., ii, 253.
oxides, influence of water vapour on the reduction of, by mixtures of carbon monoxide and carbon dioxide (BOUDOUARD), A., ii, 91.
phosphide, preparation of (GIN), A., ii, 92.
sulphates, genesis and constitution of (SCHARIZER), A., ii, 823.
sulphides (GEDEL), A., ii, 714.
Ferric arsenate (DUNCAN), A., ii, 167.
chloride, oxidising action of, in sunlight (BENRATH), A., i, 730.
compounds of, with alkali chlorides, formation and solubility of (HINRICHSEN and SACHSEL), A., ii, 92.
chlorides, colloidal (MALFITANO), A., ii, 459.
hydroxide, colloidal (DUMANSKY), A., ii, 37.
physical and chemical properties of (LINDER and PICTON), T., 1918; P., 241.
conditions of stability of (GIOLITTI), A., ii, 823.
influence of ammonium chloride on (DUMANSKY), A., ii, 393.
influence of various salts on (DUMANSKY), A., ii, 714.
oxide, colloidal, brown modification (NICOLARDOT), A., ii, 167.
solubility of, in hydrofluoric acid (DEUSSEN), A., ii, 459.
Iron:—
Ferric oxide, estimation of, in presence of much alumina (DEUSSEN), A., ii, 484.
sulphate, hydrolysis of concentrated solutions of (RECOURA), A., ii, 527.
basic (RECOURA), A., ii, 527.
hydrated, transformations of (RECOURA), A., ii, 590.
normal hydrated. See Janosite.
sodium sulphates, synthesis of (SCHARIZER), A., ii, 823.
Ferrous arsenate and ferrous ammonium arsenate (DUNCAN), A., ii, 167.
oxide, detection of, in presence of ferric oxide (BLUM), A., ii, 206.
sulphide, action of dilute acids on (LIPSCHITZ and v. HASSLINGER), A., ii, 253.
Iron organic compounds:—
cyanogen compounds, blue (HOFMANN, HEINE, and HÖCHTLEN), A., i, 38; (HOFMANN and RESENSCHECK), A., i, 756.
peroxythiocyanate, supposed existence of (TARUGI), A., i, 176.
Ferric ethoxide (NICOLARDOT), A., i, 316.
Iron ores, estimation of phosphorus in (ROWLAND and DAVIES), A., ii, 116.
estimation of sulphur in (HARTWIGSSON), A., ii, 552.
Cast iron, molten, the increase in volume of, saturated with carbon, in the electric furnace at the moment of solidifying (MOISSAN), A., ii, 166.
Steel, hardened, structure of (KURBATOFF), A., ii, 392.
influence of nitrogen on (BRAUNE), A., ii, 638; (LE CHATELIER), A., ii, 639.
Steels, ternary, properties, analysis, and classification of (GUILLET), A., ii, 590.
Steel alloys. See Aluminium steels, Cobalt steels, Tin steels, and Titanium steel.
Steel analysis, apparatus for the absorption of hydrogen sulphide in (JENNER), A., ii, 282.
estimation of chromium in (IBBOTSON and HOWDEN), A., ii, 119, 120.
estimation of manganese in (RUBRICUS), A., ii, 766.
a modified form of the persulphate method of estimating manganese in (SMITH), A., ii, 66.
estimation of molybdenum in (AUCHY), A., ii, 861.

Iron ores :—
Steel, rapid estimation of nitrogen in (BRAUNE), A., ii, 60.
estimation of sulphur in (MCCABE), A., ii, 761.
apparatus for estimating sulphur in (KLEINE), A., ii, 856.
Iron (in general) **estimation and separation :—**
analysis, apparatus for the absorption of hydrogen sulphide in (JENNER), A., ii, 282.
titration of ferrous, with permanganate in presence of hydrochloric acid (BAXTER and FREVERT), A., ii, 653.
estimation of small quantities of (LEATHER), A., ii, 422.
estimation of, volumetrically (TARUGI and SILVATICI), A., ii, 66.
apparatus for the estimation of carbon in, by Eggertz's method (SCHUMACHER), A., ii, 203.
estimation of manganese in (RUBRICUS), A., ii, 766.
a modified form of the persulphate method of estimating manganese in (SMITH), A., ii, 66.
rapid estimation of nitrogen in (BRAUNE), A., ii, 60.
estimation of phosphorus in, colorimetrically (HEWITT), A., ii, 353.
improvement of Drown and Shimer's method of estimating silicon in (THILL), A., ii, 62.
estimation of sulphur in (MCCABE), A., ii, 761.
apparatus for estimating sulphur in (KLEINE), A., ii, 856.
estimation of, colorimetrically, in blood (JOLLES), A., ii, 67, 206.
metallic, estimation of, in "Ferrum redactum" (CHRISTENSEN; BARMWATER), A., ii, 654.
estimation of, in pyrolusites (CORMIMBŒUF), A., ii, 286.
separation of glucinum from aluminium and (VAN OORDT), A., ii, 88.
separation of, from nickel and cobalt, by means of formic acid (BORGSTRÖM), A., ii, 538.
Irons and steels, microscopic examination of (JENKINS and RIDDICK), A., ii, 118.
Isodimorphism (WALLERANT), A., ii, 237, 380.
Isoetes spermatozoids, chemotaxis of (SHIBATA), A., ii, 190.
Isoform, a new antiseptic (HEILE; WEIK), A., ii, 847.
Isomerides, geometrical, the transmutation of (STEWART), P., 73.
Isomorphism and miscibility in the solid state (JAEGER), A., ii, 513.
and solid solutions (BRUNI and TROVANELLI), A., ii, 153.
Isomorphous salts, new series of (BELLUCCI and PARRAVANO), A., ii, 395.
Itaconic acid, methyl ester (ANSCHÜTZ and HAAS), A., i, 259.
Itaconic anhydride, combination of, with hydrogen bromide (ILSKY), A., i, 323.

J.

Janosite, a new hydrated normal ferric sulphate, from Hungary (BÖCKH and EMSZT), A., ii, 586.
Jarosite from Moravia (KOVÁŘ), A., ii, 176.
Jordanite from Upper Silesia (SACHS), A., ii, 96.

K.

Kaempferol, an isomeride of (v. KOSTANECKI and SCHREIBER), A., i, 808.
Kainite, manuring with (SUZUKI), A., ii, 348.
Kajeput oil, green colour of (GEERLIGS), A., i, 223.
Kaolin, action of barium and strontium chlorides on, at high temperatures (WEYBERG), A., ii, 262.
Karite tree, gutta-percha-like substance from the resin of the (FRANK and MARCKWALD), A., i, 293.
Katabolism, proteid (COHNHEIM), A., ii, 839.
See also Metabolism.
Ketens (STAUDINGER), A., i, 444.
4-Keto-3-acetyl-5-benzylidene-2-methyldihydrofuran (RUHEMANN and MERRIMAN), T., 1390; P., 224.
1-Keto-2-acetyl-4-phenyl-3-methyl*cyclo*pentadiene, 5-hydroxy- (RUHEMANN and MERRIMAN), T., 1390; P., 224.
4-Keto-2-alkyldihydroquinazolines, 7-nitro-, synthesis of, from 4-nitroacetylanthranilic acid and from 4-nitroacetylanthranil (BOGERT and STEINER), A., i, 945.
4-Keto-5-benzylidene-2-methyldihydrofuran-3-carboxylic acid, ethyl ester (RUHEMANN and MERRIMAN), T., 1393; P., 225.
6-Keto-3-benzyl-4-methyl-3:6-dihydropyridine, 5-cyano-2-hydroxy-. See Benzylmethylglutaconimide, cyano-.
γ-Ketobutane, β-hydroxy-. See Acetylmethylcarbinol.

4-Keto-2-*di*chloromethyldihydroquinazoline (GÄRTNER), A., i, 130.

1-Keto-2:4-diacetyl-5-methyl-3-*p*-hydroxy-*m*-methoxyphenyl-1:2:3:4-tetrahydrobenzene, oxime of (KNOEVENAGEL and ALBERT), A., i, 63.

4-Keto-3:5-diethylpenthiophen-2:6-dithiol (APITZSCH), A., i, 811.

α-Ketodihydroanethole, *di*bromo- and *di*bromonitro- (HOERING), A., i, 902.

Ketodihydro*cyclo*geranic acids. See Dihydro*iso*phoronecarboxylic acids.

4-Ketodihydroquinazoline, 5-nitro-, and its additive salts (BOGERT and CHAMBERS), A., i, 613.

4-Ketodihydroquinazolines, 5-nitro-, synthesis of, from 6-nitroacetylanthranil and primary amines (BOGERT and CHAMBERS), A., i, 612; (BOGERT and SEIL), A., i, 945.

γ-Keto-αβ-dimethylbutyl alcohol and its semicarbazone and corresponding glycol (SALKIND), A., i, 732.

4-Keto-3:5-dimethylpenthiophen-2:6-dithiol and its ethers and diacyl esters (APITZSCH), A., i, 810.

α-Keto-βγ-diphenylbutyric acid, γ-hydroxy-, and its sodium salt, oxime, phenylhydrazone, and lactone (ERLENMEYER), A., i, 784.

3-Keto-2:5-diphenyl-3:4-dihydro-1:4-diazine (JAPP and KNOX), T., 702; P., 153.

4-Keto-3:5-diphenylpenthiophen-2:6-dithiol (*4-keto-2:6-diphenyl-4-thiophen-3:5-dithiol*) (APITZSCH), A., i, 810.

Ketoethanetricarboxylic acid and its ethyl ester, and calcium salt (KURREIN), A., i, 413.

Ketoethoxyphenylnaphthatriazine (BUSCH and BERGMANN), A., i, 310.

α-Keto-fatty acids, esters, and their semicarbazones (LOCQUIN), A., i, 11.

Ketohexahydrobenzoic acids. See *cyclo*-Hexanonecarboxylic acids.

4-Keto-1-methyl-1-*di*chloromethyldihydrobenzene, action of phosphorus pentachloride on (AUWERS and KEIL), A., i, 445.

4-Keto-2-methyldihydroquinazoline, 5-nitro-, and its additive salts (BOGERT and CHAMBERS), A., i, 613.

and its 3-alkyl derivatives, synthesis of (BOGERT and SEIL), A., i, 945.

7-nitro-, and its 3-methyl derivative (BOGERT and STEINER), A., i, 946.

4-Keto-7-methyldihydroquinazolines and their 2-alkyl derivatives (BOGERT and HOFFMAN), A., i, 891.

1-Keto-5-methyl-3-*p*-hydroxy-*m*-methoxyphenyl-1:2:3:4-tetrahydrobenzene-2:4-dicarboxylic acid, ethyl ester (KNOEVENAGEL and ALBERT), A., i, 63.

4-Keto-3-methylpenthiophen-2:6-dithiol and its dimethyl ether and diacetyl ester (APITZSCH), A., i, 810.

5-Keto-3-methyl-4-vanillylidene-4:5-dihydro*iso*oxazole (KNOEVENAGEL and ALBERT), A., i, 63.

Ketone, $C_{11}H_9O_2N$, and its phenylhydrazone, from the trioxime of 3-nitrosophenylmethylpyrrole (ANGELICO), A., i, 660.

$C_{11}H_{10}O_2N_2$, and its *p*-nitrophenylhydrazone, from the compound $C_{11}H_{11}O_2N_3$ (ANGELICO), A., i, 660.

Ketones, preparation of (SABATIER and SENDERENS), A., i, 401.

heats of combustion and formation of (THOMSEN), A., ii, 573.

mechanism of the chlorination of mixtures of, with water in presence of marble (KLING), A., i, 327.

condensation of, with aldehydes (v. LIPPMANN and FRITSCH), A., i, 443.

condensation of, with aldehydes in presence of potassium cyanide (SALKIND), A., i, 732.

condensation of, with *o*-aldehydocarboxylic acids (LUKSCH), A., i, 68.

action of ammonium sulphide on (MANCHOT and KRISCHE), A., i, 142.

action of tetrabromo-*o*-benzoquinone on (JACKSON and RUSSE), A., i, 217.

action of carbon disulphide and potassium hydroxide on (APITZSCH), A., i, 810.

condensation of, with catechol (FABINYI and SZEKI), A., i, 591.

condensation of, with esters (KNOEVENAGEL; KNOEVENAGEL and MOTTEK), A., i, 61.

condensation of, with esters, and alkylation of, use of sodamide in the (CLAISEN, FEYERABEND, SCHULZE, and GÄRTNER), A., i, 286.

condensation of, with imines (MAYER), A., i, 214, 357.

condensation of, with mercury cyanide (MARSH and STRUTHERS), T., 1878; P., 248.

action of potassium hydroxide on mixtures of phenylacetylene with (FAWORSKY), A., i, 773; (SKOSSAREWSKY; BORK), A., i, 774; (NEWEROWITSCH; BERTRAND; ROMANOFF), A., i, 775.

Ketones, compounds of, with ammonia (THOMAE), A., i, 509, 684, 718.
phosphorus acid derivatives of (MARIE), A., i, 17.
aromatic, hydrogenation of, by means of reduced nickel (DARZENS), A., i, 66.
additive compounds of, with hydrogen bromide (ZINCKE and MÜHLHAUSEN), A., i, 289.
and aromatic aldehydes, characterisation of (PETRENKO-KRITSCHENKO and DOLGOPOLOFF), A., i, 354; (PETRENKO-KRITSCHENKO, ELTSCHANINOFF, KESTNER, and DOLGOPOLOFF), A., i, 742.
of the fatty series, preparation of (BOUVEAULT and LOCQUIN), A., i, 18.
saturated, new method of synthesizing (DARZENS), A., i, 172.
unsaturated, ψ-nitrosites of (WIELAND and BLOCH), A., i, 706.
$\alpha\beta$-unsaturated, addition of acids and salts to (VORLÄNDER, ROLLE, SIEBERT, and WEISSHEIMER), A., i, 792.
doubly unsaturated, action of magnesium organic compounds on (BAUER), A., i, 278.
the vanillin-hydrochloric acid reaction for (ROSENTHALER), A., ii, 489; (KUTSCHEROFF), A., ii, 771.
estimation of, by means of their nitrophenylhydrazones (ALBERDA VAN EKENSTEIN and BLANKSMA), A., i, 474.
estimation of, in essential oils (SADTLER), A., ii, 867.
Ketones, α-halogen, action of, on alkyl sulphides (SMILES), P., 93.
*iso*nitroso-, condensation of, with aldoximes (DIELS and VAN DER LEEDEN), A., i, 946.
See also Anilino-ketones.
α-Ketonic acids and esters, preparation of, from α-oximino-esters (BOUVEAULT and LOCQUIN), A., i, 10; (LOCQUIN), A., i, 11.
condensation of, with aldehydes by means of hydrochloric acid or sodium hydroxide (ERLENMEYER), A., i, 783.
β-Ketonic acids, α-substituted, preparation of (BOUVEAULT and LOCQUIN), A., i, 18.
esters, azo-dyes from (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 723.
aromatic, synthesis of (MARGUERY), A., i, 527.
o-**Ketonic acids**, aromatic, isomeric esters of (GOLDSCHMIEDT and LIPSCHITZ), A., i, 132; (MEYER), A., i, 133.
Ketonic acids, esters, reduction of (BOUVEAULT and BLANC), A., i, 13.
Ketonic alcohols (KLING), A., i, 732.
action of organomagnesium compounds on (FRANKE and KOHN), A., i, 111.
β-Ketonic aldehydes, new (COUTURIER and VIGNON), A., i, 570.
Ketonic compounds, action of phenylpropiolyl chloride on (RUHEMANN and MERRIMAN), T., 1383; P., 224.
addition of sodium hydrogen sulphite to (STEWART), T., 185; P., 13, 78.
olefinic, combination of, with mercaptans (RUHEMANN), T., 17, 461; P., 123.
2-Keto-1-phenyldihydroquinoxaline, 6-amino-, and its diacetyl derivative, and 6-nitro- (REISSERT and GOLL), A., i, 247.
4-Keto-2-phenyl-7-methyldihydroquinazoline and its *m*- and *p*-nitro-derivatives (BOGERT and HOFFMAN), A., i, 891.
4-Keto-3-phenyl-2-methyldihydroquinazoline, 5-nitro- (BOGERT and CHAMBERS), A., i, 613.
γ-Keto-η-phenyl-Δ^{ϵ}-octenoic acid and its esters, salts, and oxime, and stereoisomeride (RUPE and SPEISER), A., i, 351.
γ-Keto-η-phenyloctoic acid, ϵ-bromo- (RUPE and SPEISER), A., i, 351.
4-Keto-3-phenylpenthiophen-2:6-dithiol and its 5-methyl derivative (APITZSCH), A., i, 811.
2-Keto-1-phenyltetrahydroquinoxaline, 6-amino-, and its diacetyl derivative, and 6-nitro- (REISSERT and GOLL), A., i, 247.
Ketoquinazoline, synthesis of derivatives of (v. PAWLEWSKI), A., i, 246.
6-Ketoquinoline, 5:5-*di*chloro- (FÜHNER), A., i, 828.
2-Ketotetrahydroquinoline, 6:8-*di*nitro- (VAN DORP), A., i, 81.
4-Keto-2-thion-3-phenyl-1 2:3:4-tetrahydroquinazoline (v. PAWLEWSKI), A., i, 246.
γ-Keto-$\alpha\beta\beta$-trimethylbutyl alcohol and its semicarbazone (SALKIND), A., i, 732.
Ketoximes, reduction of (MAILHE), A., i, 635.
Keuper marls, causes of variegation in (MOODY), A., ii, 725.
Kidney, gaseous metabolism of the (BARCROFT and BRODIE), A., ii, 99, 737.

Kidney, effect of blood on the (SOLLMANN), A., ii, 180.
action of chloroform on the blood vessels of the (EMBLEY and MARTIN), A., ii, 264.
effects of isotonic solutions on the (SOLLMANN), A., ii, 181, 337.
situation in the, where foreign substances are excreted (BIBERFELD), A., ii, 48.
lecithin in the (RUBOW), A., ii, 336.
Kidney extract, effect of hypnotics and antipyretics on the rate of catalytic action of (NEILSON and TERRY), A., ii, 738.
Kidneys, physiology of the (LOEWI, FLETCHER, and HENDERSON; LOEWI and ALCOCK; HENDERSON and LOEWI), A., ii, 739.
Kinetics. See under Affinity.
Kipp's apparatus, cheap (SOUTHERDEN), A., ii, 20.
improved (FRISWELL), A., ii, 20; (SCHRIMPFF), A., ii, 383.
Kyroprotoic acids (v. FÜRTH), A., i, 498.
Krypton, new method of preparing (VALENTINER and SCHMIDT), A., ii, 704.

L.

Lac resin, pyrogenetic decomposition of (ÉTARD and WALLÉE), A., i, 604.
r-**Lactaldehyde**, acetate and semicarbazone of (NEF), A., i, 6.
Lactam formation from γ-lactones (KÜHLING and FALK), A., i, 372.
Lactase, animal (BIERRY), A., ii, 406; (PORCHER), A., ii, 540.
Lactation, effects of injections of dextrose during (PORCHER), A., ii, 739.
removal of the mammary glands during (PORCHER), A., ii, 469, 600.
Lactic acid (*ι-ethylidenelactic acid*, *α-hydroxypropionic acid*, *fermentation lactic acid*), optical activity of (MCKENZIE), T., 1373; P., 224.
and water, viscosity of (DUNSTAN), T., 14.
volatility of, with water vapours (UTZ), A., ii, 361.
d-**Lactic acid** (*paralactic acid*, *sarcolactic acid*) (JUNGFLEISCH and GODCHOT), A., i, 318.
in the animal organism (MORIYA), A., ii, 181.
absence of, in diabetes (MANDEL), A., ii, 182.
dl-**Lactic acid**, *l*-bornyl and *l*-menthyl esters, hydrolysis of, by alkali (MCKENZIE and THOMPSON), T., 1014; P., 184.
l-**Lactic acid**, asymmetric synthesis of (MCKENZIE), T., 1373; P., 224.
i-**Lactic acid**, dilactide of (JUNGFLEISCH and GODCHOT), A., i, 259.
Lactic acid bacteria. See Bacteria.
d-**Lactide** (JUNGFLEISCH and GODCHOT), A., i, 630.
Lactolase, an enzyme causing the formation of lactic acid in plant cells (STOKLASA), A., ii, 192.
Lactone, $C_8H_{14}O_3$, from the hydrolysis of the acid, $C_{12}H_{22}O_5$ (LESCH and MICHEL), A., i, 403.
$C_{16}H_{16}O_2N_2$, from ethyl ethylacetoacetate and phenylmethylpyrazolone (STOLLÉ), A., i, 838.
$C_{17}H_{14}O_4$, from *p*-methoxyphenylpyruvic acid and benzaldehyde (ERLENMEYER and WITTENBERG), A., i, 240.
$C_{19}H_{18}O_3$, from *p*-isopropylphenylpyruvic acid and benzaldehyde (ERLENMEYER and MATTER), A., i, 238.
Lactones, formation of (BLANC), A., i, 115.
characterisation of, by means of hydrazine (BLAISE and LUTTRINGER), A., i, 329.
αβ- and βγ-unsaturated, preparation of (ERLENMEYER), A., i, 785.
Lactonic acid, $C_8H_{10}O_6$, from the oxidation of γ-diallylbutyrolactone (KASANSKY), A., i, 320.
Lactosazone, formation of (DE GRAAFF), A., ii, 559.
Lactose (*milk sugar*), origin of (PORCHER), A., ii, 469, 600, 739.
quantitative hydrolysis of (PFYL and LINNE), A., ii, 770.
new reaction for (WÖHLK), A., ii, 122.
diphenylhydrazine as a reagent for (DE GRAAFF), A., ii, 866.
estimation of, in milk (LOHNSTEIN), A., ii, 773.
estimation of, in cows' and human milk, corrections to be applied in the (PATEIN), A., ii, 122.
Lactyl-lactyl-lactic acid (JUNGFLEISH and GODCHOT), A., i, 259.
Lævulic acid from the hydrolysis of nucleic acids (LEVENE), A., i, 105.
formation of, from sugars (ERLENMEYER), A., i, 408.
condensation of, with isobutaldehyde (MEINGAST), A., i, 319.
Lævulic aldehyde peroxide (HARRIES), A., i, 364.

Lævulose (d-*fructose*), formation of, from dextrose, and its detection (OST), A., i, 684.
action of inorganic compounds on the rotation of (GROSSMANN), A., i, 415; (RIMBACH and WEBER), A., i, 416.
action of radium bromide on (MORRELL and BELLARS), T., 291 ; P., 80.
the phenylmethylhydrazine reaction of (NEUBERG), A., i, 90.
detection of, in presence of glucosamine (NEUBERG), A., ii, 769.
detection of, in human body fluids (OFNER), A., ii, 769.
precipitation of, from urine by lead acetate (R. and O. ADLER), A., ii, 337, 843.
Lanocerin (RÖHMANN), A., ii, 842.
Lard from hogs fed on cotton seed meal, presence of cotton seed oil in (EMMETT and GRINDLEY), A., ii, 427.
testing (POLENSKE), A., ii, 870.
detection of cocoanut oil in (HOTON), A., ii, 870.
Latent heats. See under Thermochemistry.
Law of conservation of weight, apparatus to demonstrate the (SALVADORI), A., ii, 694.
Law of multiple proportions, experimental demonstration of the (HABERMANN), A., ii, 693.
Laws of combination of gases by volume, apparatus to demonstrate the (SALVADORI), A., ii, 694.
Lead, electrolytic refining of, in hydrofluosilicic acid solutions (SENN), A., ii, 389.
in pharmacopœial chemicals (HILL), A., ii, 356.
chamber process. See Sulphuric acid under Sulphur.
Lead alloys with gold (VOGEL), A., ii, 462.
with magnesium (GRUBE), A., ii, 320 ; (KURNAKOFF and STEPANOFF), A., ii, 710.
Lead carbonate, application of Watt's principle to the dissociation of (COLSON), A., ii, 304.
chromate. See Crocoite.
hydroxycarbonate (*white lead*), estimation of acetic acid in (THOMPSON), A., ii, 556.
imide (FRANKLIN), A., ii, 583.
iodide, relation of, to water and oxygen (SCHTSCHERBAKOFF ; BOGORODSKY), A., ii, 711.
ammono-basic iodide (FRANKLIN), A., ii, 583.
oxide, interaction of, with calcium carbide (PRING), T., 1538 ; P., 231.
Lead :—
Plumbates, platinates, and stannates, isomorphism of (BELLUCCI and PARRAVANO), A., ii, 395.
Lead sulphate, solubility of, in ammonium acetate solutions (NOYES and WHITCOMB), A., ii, 523.
potassium sulphate, existence of a definite (BELTON), A., ii, 457.
sulphide. See Galena.
thiosulphate, dissociation constant of (SLATOR), T., 492 ; P., 121.
Lead ferrocyanide, action of oxalic acid on (LEUBA), A., i, 422.
Lead, commercial, analysis of (HOLLARD and BERTIAUX), A., ii, 63.
detection and estimation of, in cream of tartar (L. and J. GADAIS), A., ii, 357.
estimation of, electrolytically (SMITH), A., ii, 860.
estimation of, volumetrically (CERVI), A., ii, 63.
estimation of, by persulphate in acid solution (DITTRICH and REISE), A., ii, 483.
estimation of, as sulphide (MULLER), A., ii, 118.
separation of, from silver (LIDHOLM), A., ii, 204.
Lead minerals, analysis of (MULLER), A., ii, 119.
Lead-monetite, artificial production of (DE SCHULTEN), A., ii, 174.
Leaves, evolution of the weight and the organic matters of, during necrobiosis in white light (BEULAYGUE), A., ii, 51.
assimilation of carbon dioxide by (BLACKMAN and MATTHAEI), A., ii, 750.
dead, fixation of atmospheric nitrogen by (HENRY), A., ii, 111.
fallen, decomposition of (HENRY), A., ii, 112.
green, influence of temperature on the assimilation of carbon dioxide by (KANITZ), A., ii, 848.
physiological processes of, with special reference to the interchange of energy between the leaf and its surroundings (BROWN and ESCOMBE), A., ii, 849.
Lecithin in heart and kidneys in the normal condition, during starvation, and in fatty degeneration (RUBOW), A., ii, 336.
in wine (FUNARO and BARBONI), A., ii, 275.
preparation and estimation of (ROAF and EDIE), A., ii, 364.
identification of (RIEDEL), A., ii, 428.

Lecithin and brain tissue, production of choline from (CORIAT), A., ii, 47.
estimation of, in grape stones and in wine (MURARO), A., ii, 564.
Lecithin, bromo-, preparation of (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 163.
iodo-derivatives (RIEDEL), A., i, 164.
Leeches, bile pigments in (SPIESS), A., ii, 737.
Lemon juice, composition of (BEYTHIEN and BOHRISCH), A., ii, 413.
Lemon oil, saponification number and dry residue of (BERTÉ), A., ii, 126.
indirect estimation of aldehydes in (BERTÉ), A., ii, 656.
Lemon tree, oil from the leaves and stems of the (LITTERER), A., i, 802.
Lepidine. See 4-Methylpyridine.
Leucæmia, a case of (WEBER), A., ii, 48.
Leucine, excretion of, in a case of cystinuria (ABDERHALDEN and SCHITTENHELM), A., ii, 741.
as a source of nitrogen for plants (LUTZ), A., ii, 276.
α-bromopropionyl derivatives (FISCHER and WARBURG), A., i, 690.
chloroacetyl derivative (FISCHER and WARBURG), A., i, 691.
Leucine, ethyl ester, hydrolysis of, by the pancreatic ferment (WARBURG), A., i, 176.
l-**Leucine** (natural), carbamide derivatives of (HUGOUNENQ and MOREL), A., i, 332.
condensation of, with carbamic acid (HUGOUNENQ and MOREL), A., i, 178.
i-**Leucine**, synthesis of (BOUVEAULT and LOCQUIN), A., i, 636.
r-**Leucine**, new synthesis of (BOUVEAULT and LOCQUIN), A., i, 33.
ε-**Leucine nitrile**, benzoyl derivative. See *n*-Hexonitrile, ε-amino-, *N*-benzoyl derivative of.
Leucine-carbamide and **-carbimide**, ethyl esters (HUGOUNENQ and MOREL), A., i, 264.
Leucocytes, source of the (GOODALL and NOËL PATON), A., ii, 742.
action of unaltered proteid solutions on the (HAMBURGER and v. REUSS), A., ii, 744.
behaviour of, in malignant growths (FARMER, MOORE, and WALKER), A., ii, 845.
Leucocytosis, digestive (GOODALL and NOËL PATON), A., ii, 742.
of typhus fever (LOVE), A., ii, 338.
Leuco-prune derivatives (GNEHM and BAUER), A., i, 832.
Leucylalanine and its chloroacetyl derivative (FISCHER and WARBURG), A., i, 691.
Leucylalanylglycines (FISCHER and AXHAUSEN), A., i, 689.
Leucyl-diglycylglycine and **-glycine**, ethyl ester and hydrochloride (FISCHER and REUTER), A., i, 264.
Leucylglycine and its copper salt and benzoyl and α-bromopropionyl derivatives (FSICHER and BRUNNER), A., i, 690.
Leucyl*iso*serines and their phenylcarbamides (FISCHER and KOELKER), A., i, 692.
Libella, inanition studies in (SLOWTZOFF), A., ii, 45.
Lichen colours, detection of (TOLMAN), A., ii, 215.
Lichens, constituents of (HESSE), A., i, 138; (ZOPF), A., i, 212, 789.
archil, and their chromogens (HESSE), A., i, 140.
Lieno-α-protease, products of (CATHCART), A., ii, 404.
Life, action of enzymes in the chemistry of (FISCHER), A., ii, 841.
Light. See under Photochemistry.
Lignin (GRAFE), A., i, 22.
Lignocelluloses, estimation of methoxyl groups in (WHEELER), A., i, 574.
Lime. See Calcium oxide.
Limestone, estimation of magnesium carbonate in (KOPPESCHAAR), A., ii, 421.
Limonene nitrosocyanides and their derivatives (LEACH), T., 413; P., 117.
*iso***Limonene** (TSCHUGAEFF), A., i, 71.
Linin from *Linum catharticum* (HILLS and WYNNE), T., 327; P., 74.
Linking, double, influence of, on rotatory power (MINGUIN), A., ii, 130.
single and double, in an open and in a closed ring, comparison of (PRAGER), A., i, 391.
carbon double, nature of the (BAUER), A., i, 729.
ethylenic, influence of, on rotatory power (MINGUIN), A., i, 321.
of unsaturated esters, direct fixation of organo-magnesium derivatives on the (BLAISE and COURTOT), A., i, 257.
migration of the, in unsaturated open-chain acids (BLAISE and LUTTRINGER), A., i, 168.
Linseed oil, drying process of (FAHRION), A., i, 10.
detection of, in nut oil (HALPHEN), A., ii, 560.

*iso*Linusic acid from the oil from the seeds of *Gynocardia odorata* (POWER and BARROWCLIFF), T., 899; P., 177.
Lipase (DUNLAP and SEYMOUR), A., ii, 753.
fractional hydrolysis of optically active esters by (DAKIN), A., i, 556.
Liquefaction, determination of volume change on (HESS), A., ii, 373.
Liquid mixtures, viscosity of (DUNSTAN), T., 11.
viscosity of, at their boiling points (FINDLAY), A., ii, 803.
of constant boiling point, molecular refractions of (HOMFRAY), T., 1430; P., 225.
of minimum boiling point (HOLLEY and WEAVER), A., ii, 675.
Liquids, specific heat of, at low temperatures (VAN LAAR), A., ii, 148.
densities of two, empirical relationship between the (SCHAPOSCHNIKOFF), A., ii, 373.
some phenomena which can occur in the case of partial miscibility of two, one of them being anomalous, especially water (VAN LAAR), A., ii, 234, 507.
organic, surface tensions of (BOLLE and GUYE), A., ii, 233.
requiring clarification, simulation of traces of albumin by substances which interfere with the ferrocyanide test in (BARDACH), A., ii, 128.
Lithium, influence of temperature on the electrical conductivity of (BERNINI), A., ii, 222.
occurrence of, in the human body (HERRMANN), A., ii, 735.
Lithium carbonate, solubility of, in solutions of salts of the alkali metals (GEFFCKEN), A., ii, 247.
mercuric iodide (DUBOIN), A., ii, 637.
nitrate, electrolysis of fused (BOGORODSKY), A., ii, 705.
uranyl sulphate (OECHSNER DE CONINCK and CHAUVENET), A., ii, 530.
Lithium, detection of, in presence of sodium (BENEDICT), A., ii, 124.
Liver, paths of absorption from the (MENDEL and UNDERHILL), A., ii, 737.
selective action of chloroform on the (DOYON and BILLET), A., ii, 471.
chemical changes in, during phosphorus poisoning (WAKEMAN; MEINERTZ), A., ii, 470.
of dog and sturgeon, nitrogen distribution in the (WAKEMAN), A., ii, 467.
Liver autolysis (BAER and LOEB), A., ii, 734.
Liver tissue, hexone bases of (WAKEMAN), A., ii, 467, 841.
Liverworts, oils from (MÜLLER), A., i, 713.
Lossen's reaction (MOHR), A., i, 274.
Luminescope for comparing substances under the influence of radium rays (WEBSTER), A., ii, 71.
Lung ventilation, regulation of (HALDANE and PRIESTLEY), A., ii, 400; (FITZGERALD and HALDANE), A., ii, 539.
Lungs, influence of ozone on the (BOHR and MAAR), A., ii, 329.
See also Respiration.
d-Lupanine, products formed, under various conditions, by the action of halogen on (SOLDAINI), A., i, 371.
Lupin seeds, composition of conglutin from (ABDERHALDEN and HERRICK), A., i, 846.
peptone from (MACK), A., ii, 474.
amino-acids obtained by the hydrolysis of proteids of (WINTERSTEIN and PANTANELLI), A., i, 687.
Lupinus albus, amino-acids from the seedlings of (SCHULZE and WINTERSTEIN), A., i, 686.
Lupus, opsonic content of blood serum in health and in (BULLOCK), A., ii, 844.
Lymph-flow from the pancreas (BAINBRIDGE), A., ii, 100.
Lysine and its platinichlorides (SIEGFRIED), A., i, 297.
isolation of (WINTERSTEIN), A., i, 726.
neutralisation of, by antilysin (CRAW), A., ii, 747.
estimation of nitrogen in, by Kjeldahl's method (SÖRENSEN and ANDERSEN), A., ii, 553.
Lysine, methyl ester, and anhydride, and their additive salts (FISCHER and SUZUKI), A., i, 121.

M.

Magenta (*aniline-red*), *p*-nitro-, the copper compound of (SCHAPOSCHNIKOFF and SVIENTOSLAVSKI), A., i, 161.
Magnalium, three varieties of (BARNETT), A., ii, 636.
See also Aluminium alloys with magnesium.
Magnesia. See Magnesium oxide.
Magnesium, spectrum of (BARNES), A., ii, 389.

Magnesium anodes, behaviour of (BABOROVSKÝ), A., ii, 671.
some reactions with (FAKTOR), A., ii, 455.
amount of, in animal organs (TOYONAGA), A., ii, 335.
and calcium, inter-relationship of the excretion of (MALCOLM), A., ii, 271.
manurial action of different forms of (MEYER), A., ii, 197.
Magnesium alloys with aluminium (GRUBE), A., ii, 523; (PÉCHEUX), A., ii, 526.
See also Magnalium.
with lead (GRUBE), A., ii, 320.
with lead and with tin (KURNAKOFF and STEPANOFF), A., ii, 710.
with mercury (*magnesium amalgam*), action of, on acetone (COUTURIER and MEUNIER), A., i, 326.
with thallium and tin (GRUBE), A., ii, 636.
Magnesium salts, physiological studies on (MELTZER and AUER), A., ii, 743.
and calcium salts, importance of, for plants (GÖSSEL), A., ii, 51.
Magnesium bromide, hydrated, dehydration of (KREIDER), A., ii, 636.
carbide, existence of (NANCE), P., 124.
carbonate, dissociation of (BRILL), A., ii, 522.
estimation of, in limestone (KOPPESCHAAR), A., ii, 421.
estimation of, in soils (MONTANARI), A., ii, 204.
carbonates, basic, from the volcanic eruption at Santorin in 1866 (LACROIX), A., ii, 464.
nitrite and its decomposition by heat (RÂY), T., 178.
oxide (*magnesia*), formation of, from magnesium carbonate by heat, and the effect of temperature on its properties (ANDERSON), T., 257; P., 11.
and lime, solubility of, in solutions of sodium chloride; estimation and separation of (MAIGRET), A., ii, 482.
ammonium selenate and sulphate, crystallographic study of (TUTTON), T., 1123; P., 177.
sulphate, equilibrium between sodium sulphate and (DENISON), A., ii, 456.
uranyl sulphate (OECHSNER DE CONINCK and CHAUVENET), A., ii, 530.
Magnesium organic compounds, new method for the preparation of (TSCHELINZEFF), A., i, 40.
interaction of, with acridines (SENIER, AUSTIN, and CLARKE), T., 1469; P., 227.
action of, on amines, and on ammonium, amine, and hydrazine salts (HOUBEN), A., i, 873.
action of, on ethyl chloroacetates (BODROUX), A., i, 585.
action of sulphuryl chloride on (ODDO), A., i, 400.
reaction of, with unsaturated compounds (KOHLER and HERITAGE), A., i, 207, 208; (KOHLER and JOHNSTIN), A., i, 215; (KOHLER and REIMER), A., i, 347; (KOHLER), A., i, 358, 700.
secondary reaction of (SABATIER and MAILHE), A., i, 706.
reducing action of (FRANZEN and DEIBEL), A., i, 843.
conversion of, into Grignard-Baeyer oxonium compounds and the thermochemical investigation of this reaction (TSCHELINZEFF), A., ii, 802.
See also Grignard's reaction.
Magnesium, estimation of, as magnesium pyrophosphate (JÄRVINEN), A., ii, 555.
Magnetic hysteresis at high frequencies (GUYE and SCHIDLOF), A., ii, 228.
Magnetic qualities of some alloys not containing iron (FLEMING and HADFIELD), A., ii, 799.
Magnetisation-coefficient and ionisation of aqueous solutions (MESLIN), A., ii, 433.
Maize, manurial experiments on (GERLACH and VOGEL), A., ii, 346.
Malachite-green and its reactions (LAMBRECHT and WEIL), A., i, 243.
Maleamide, anilide and phenylhydrazide of (PLANCHER and RAVENNA), A., i, 333.
Maleic acid, *di*bromo- and *di*chloro-, and their salts and esters (SALMONY and SIMONIS), A., i, 631.
*di*hydroxy-, further studies on (FENTON), T., 804; P., 168.
Maleic acid semialdehyde, and its oxime and phenylhydrazone (FECHT), A., i, 407.
Maleic dialdehyde and its diphenylhydrazone, tetrazone, dioxime and dibenzoyl derivative (MARQUIS), A., i, 224.
Maleimide (PLANCHER and RAVENNA), A., i, 333.
Maleinanil, *di*chloro- (OKADA), A., i, 875.

Malic acid, preparation of, and detection of citric acid in presence of (BROEKSMIT), A., ii, 868.
thio- (BIILMANN), A., i, 626.
Malignant growths, chemistry of (BEEBE), A., ii, 408; (BEEBE and SHAFFER), A., ii, 742.
behaviour of leucocytes in (FARMER, MOORE, and WALKER), A., ii, 845.
See also Cancer and Tumours.
Malonaldehyde, chloro-. See Δβ-Propene-γ-ol-α-al, β-chloro-.
nitro-, condensation of, with benzyl methyl ketone (HILL and HALE), A., i, 200.
Malonaminobenzoic acids, *o*-, *m*-, and *p*-, and their salts, and diphenylhydrazones of the *o*- and *p*-acids and dinitroso-derivative of the *o*-acid (v. POLLACK), A., i, 353.
Malonic acid, action of diazonium compounds on (BUSCH and WOLBRING), A., i, 493.
and cyano-, esters, constitution of (HALLER and MULLER), A., i, 112.
ethyl hydrogen ester, and its potassium salt, amide, and chloride (MARGUERY), A., i, 507.
ethyl ester, sodium derivative, action of, on sodium salts of unsaturated acids (REINICKE), A., i, 787; (VORLÄNDER and SIEBERT), A., i, 794.
action of, on ethyl chloroacetate (MICHAEL), A., i, 855.
action of, on ethyl ethoxysuccinate and ethyl ethoxybenzylmalonate (STAUDINGER), A., i, 736.
action of ethyl oxalic chloride on (KURREIN), A., i, 413.
action of phenylpropiolyl chloride on (RUHEMANN and MERRIMAN), T., 1394; P., 225.
Malononitrile, constitution of (HALLER and MULLER), A., i, 112.
Malt, estimation of extract in (BLEISCH and REGENSBURGER), A., ii, 660.
estimation of moisture and extract in (FORD and GUTHRIE), A., ii, 564.
Malt oxydase (ISSAEW), A., ii, 646.
Maltase of pancreatic juice (BIERRY and TERROINE), A., ii, 643.
Maltol, constitution of, and its methyl ether and phenylcarbamate (PERATONER and TAMBURELLO), A., i, 807.
pyridones from (PERATONER and TAMBURELLO), A., i, 807.
Maltosazone (OST), A., i, 22; (JALOWETZ), A., i, 262.
Maltose, quantitative hydrolysis of (PFYL and LINNE), A., ii, 770.
methylation of (PURDIE and IRVINE), T., 1029; P., 215.
new reaction for (WÖHLK), A., ii, 122.
detection and estimation of small quantities of, in presence of dextrose (BAKER and DICK), A., ii, 290.
estimation of, in presence of starch paste (WOLFF), A., ii, 487.
*iso*Maltose (OST), A., i, 22; (JALOWETZ), A., i, 262.
Mandelic acid, esters, and their alkyl derivatives, hydrolysis of, by lipase (DAKIN), A., i, 556.
dl-**Mandelic acid**, *l*-bornyl ester, hydrolysis of, by alkali (MCKENZIE and THOMPSON), T., 1013; P., 184.
Mandelonitrile, condensation product of (JAPP and KNOX), T., 701; P., 153.
Manganese alloys with iron (LEVIN and TAMMANN), A., ii, 822.
Manganese boride, MnB (BINET DU JASSONNEIX), A., ii, 90; (WEDEKIND and FETZER), A., ii, 322.
MnB_2 (WEDEKIND and FETZER), A., ii, 322.
*di*chloride (*manganous chloride*), absorption spectrum of (LAMBERT), A., ii, 638.
*per*chloride, absorption spectra of (FRIEDERICHS), A., ii, 782.
chromates (GRÖGER), A., ii, 392.
oxide, solid solution of, in ferric oxide (KORTE), T., 1511; P., 229.
oxides, reduction of, by amorphous boron (BINET DU JASSONNEIX), A., ii, 90.
silicide, $SiMn_2$, new method of preparing (VIGOUROUX), A., ii, 822.
sulphides (four), composition of (OLSEN and RAPALJE), A., ii, 91.
Manganese, detection of, in presence of iron, in well waters (CRONER), A., ii, 611.
estimation of, by means of hydrogen peroxide (DONATH), A., ii, 766.
estimation of, as sulphide in ores containing barium (BLUM), A., ii, 206.
estimation of, as the green sulphide (OLSEN, CLOWES, and WEIDMANN), A., ii, 206.
estimation of, in presence of chromium (GRÖGER), A., ii, 766.
estimation of, in irons and steels (RUBRICUS), A., ii, 766.
a modified form of the persulphate method of estimating, in iron and steel (SMITH), A., ii, 66.

Mangel-wurzels (*mangolds*), action of sodium chloride on (WOHLTMANN), A., ii, 759.
seedling diseases of (HILTNER and PETERS), A., ii, 413.
Mannide-phosphoric acid, alkaloidal salts, and **-diphenylurethane** (CARRÉ), A., i, 815.
Mannose, alkylation of (IRVINE and MOODIE), T., 1462; P., 227.
Manometers, two, of great sensitiveness for small pressures (GRIMSEHL), A., ii, 809.
Mantles, incandescent, salts and substances for (BUNTE), A., ii, 88.
as a catalyst, and its application to gas analysis (MASON and WILSON), P., 296.
Manure, injurious action of ammonium thiocyanate as (HASELHOFF), A., ii, 196.
different forms of calcium and magnesium as (MEYER), A., ii, 197.
calcium cyanamide as (PEROTTI), A., ii, 196, 278, 870; (OTTO), A., ii, 196; (ZIELSTORFF), A., ii, 477; (HASELHOFF), A., ii, 650.
lime as (LOEW), A., ii, 760.
calcium nitrate as (BELLENOUX), A., ii, 478.
humus matter as (DUMONT), A., ii, 196.
preservation and action of the nitrogen of urine as (BÖHME), A., ii, 477.
potassium salts as (WAGNER, DORSCH, RUTHS, and HAMANN), A., ii, 551.
crude and pure potassium salts with calcium as (SCHNEIDEWIND and RINGLEBEN), A., ii, 197.
Manures, retrogression of soluble phosphates in mixed (GRAY), A., ii, 855.
for fruit trees (CLAUSEN), A., ii, 478.
estimation of phosphoric acid in (HISSINK and VAN DER WAERDEN), A., ii, 419.
See also Fertilisers and Soils.
Manurial experiments at Marburg (HASELHOFF), A., ii, 650, 854.
with "basic slag-ammonia" in 1904 (MÜLLER), A., ii, 650.
with molasses as compared with ammonium sulphate and 40 per cent. potassium salts (LILIENTHAL), A., ii, 650.
Manurial value of human excrement (SEBELIEN), A., ii, 114.
Manuring as based on ten years' experiments (v. SEELHORST), A., ii, 195.
Maple syrup and **sugar**, composition and analysis of (HORTVET), A., ii, 122.
Margaramide, α-hydroxy- (LE SUEUR), T., 1893.
Margaric acid, α-hydroxy-, action of heat on, and its lactide (LE SUEUR), T., 1888; P., 285.
Margarine, detection of sesamé oil in (SPRINKMEYER and WAGNER), A., ii, 775.
estimation of butter-fat and cocoanut oil in (KIRSCHNER), A., ii, 213.
Martamic acid and its calcium salt (KUTSCHER and SCHENCK), A., i, 621.
Martite from Mexico (FARRINGTON), A., ii, 398.
Mashing process, influence of calcium sulphate on the decomposition of starch and albumin in the (WINDISCH and BODEN), A., ii, 188.
Matter, experimental demonstration of the indestructibility of (HABERMANN), A., ii, 693.
Meat fly. See *Calliphora vomitoria*.
Meats, estimation of potassium nitrate in (STÜBER), A., ii, 765.
Meconic acid (VALENTI), A., i, 788.
in the U.S.P. opium assay and certain meconates (MALLINCKRODT and DUNLAP), A., ii, 777.
Meconinedimethyl ketone (BRUNS), A., i, 353.
Meconinemethyl ethyl and *n*- and *iso*-**propyl ketones** and their oximes (LUKSCH), A., i, 68.
Meerschaum from Moravia (KOVÁŘ), A., ii, 175.
Melanurenic acid (STUER), A., i, 579; (HANTZSCH and STUER), A., ii, 312.
Melilite, composition of (ZAMBONINI), A., ii, 834.
Melilotyl-azoimide and **-hydrazide** and its hydrochloride (PSCHORR and EINBECK), A., i, 589.
Mellitic acid (*benzenehexacarboxylic acid*), gradual dissociation of (QUARTAROLI), A., i, 652.
esterification of (MEYER), A., i, 137.
Melting points, apparatus for the determination of (LANDSIEDL), A., ii, 626; (DE THIERRY; JAQUEROD and PERROT), A., ii, 627.
new and rapid method of determining (BURGESS and HOLT), A., ii, 162.
determination of, at low temperatures (GUTTMANN), T., 1037; P., 206.
and transition points of some salts (HÜTTNER and TAMMANN), A., ii, 229.
Membranes, strong sterilisable dialysing (HILL), A., ii, 682.
effect of, in liquid chains (CHANOZ), A., ii, 626.

Memorial lecture, Wislicenus (PERKIN), T., 501; P., 17.
$\Delta^{1:8(9)}$-*o*-Menthadiene, ***o*-Menthane** and its 2-bromo-derivative, ***o*-Menthanols** (2) and (8), **Δ^{1}-**, **$\Delta^{2(8)}$-**, and **$\Delta^{8(9)}$-*o*-Menthenes**, and **Δ^{1}-*o*-Menthenol**(8), synthesis of (KAY and PERKIN), T., 1068.
$\Delta^{2:8(9)}$- and **$\Delta^{3:8(9)}$-*m*-Menthadienes**, ***m*-Menthanols** (3) and (8), **Δ^{3}-** and **$\Delta^{8(9)}$-*m*-Menthenes**, and **Δ^{2}-** and **Δ^{3}-*m*-Menthenols**(8), synthesis of (PERKIN and TATTERSALL), T., 1086.
Menthane, 3:8-*di*amino-, and its thiocarbamide derivative (SEMMLER), A., i, 222.
***m*-Menthane**, 3:4-*di*bromo- (PERKIN and TATTERSALL), T., 1106.
***i*-Menthene**, synthesis of, and its nitrosochloride (PERKIN), P., 255.
Δ^{6}-Menthene-2-amine and its hydrochloride (HARRIES and JOHNSON), A., i, 535.
Δ^{3}-*p*-Menthenol(8), **$\Delta^{3,8(9)}$-*p*-Menthadiene**, ***p*-Menthanol**(8), **$\Delta^{8(9)}$-*p*-Menthene**, and ***p*-Menthane** and its 8-bromo-derivative, synthesis of (PERKIN and PICKLES), T., 639; P., 130.
Menthol, synthesis of (HALLER and MARTINE), A., i, 220, 533.
rotation and solution volume of (PATTERSON and TAYLOR), T., 34, 122; P., 15.
synthesis of homologues of (HALLER and MARCH), A., i, 276.
Menthol, tertiary, synthesis of (PERKIN), P., 255.
Menthols, stereoisomeric (KONDAKOFF), A., i, 798.
Menthone, synthesis of (HALLER and MARTINE), A., i, 220, 533.
action of potassium hydroxide on a mixture of, with phenylacetylene (ROMANOFF), A., i, 775.
***l*-Menthylcarbimide**, action of, on alcohols (PICKARD, LITTLEBURY, and NEVILLE), P., 286.
Mercaptans, addition of, to unsaturated hydrocarbons (POSNER and TSCHARNO), A., i, 279.
combination of, with olefinic ketonic compounds (RUHEMANN), T., 17, 461; P., 123.
Mercaptides, action of, on quinones (SAMMIS), A., i, 797.
Mercuric and **Mercurous compounds**. See under Mercury.
Mercury, capillary constant of (BILLITZER), A., ii, 225.
liberation of hydrogen during the action of sodium on (KAHLENBERG and SCHLUNDT), A., ii, 387.
Mercury poisoning. See under Poisoning.
Mercury compounds, photographic radiation of some (STRUTHERS and MARSH), T., 377; P., 67.
estimation of halogens in (FISCHER), A., ii, 350.
Dimercurammonium phosphate and sulphate (RÂY), T., 9.
Mercury alloys (*amalgams*), electromotive behaviour of dilute (SPENCER), A., ii, 795.
action of, on solutions (FERNEKES), A., ii, 33.
with barium, action of, on solutions of sodium and potassium salts (FERNEKES), A., ii, 33; (SMITH), A., ii, 164.
with calcium, physical constants of (MOISSAN and CHAVANNE), A., ii, 163.
with magnesium, action of, on acetone (COUTURIER and MEUNIER), A., i, 326.
with tin (VAN HETEREN), A., ii, 39.
Mercury *per*chlorates, action of alcohol on, and **Oxymercuric** *per*chlorates (CHIKASHIGÉ), T., 822; P., 172.
nitrates, formation of various, from mercurous nitrite (RÂY), T., 171.
Mercuric bromide, chloride, and iodide, glow discharge in vapours of (MATTHIES), A., ii, 669.
chloride, electrical conductivity of, in acetamide (WALKER and JOHNSON), T., 1598; P., 233.
a new cause of dissociation of, and its influence on its antiseptic properties (VITTENET), A., ii, 35; (VITTENET and CHENU), A., ii, 711.
action of acetylene on solutions of (BILTZ and MUMM), A., i, 2; (HOFMANN), A., i, 2, 268; (BILTZ), A., i, 165.
action of acetylene on aqueous and hydrochloric acid solutions of (BRAME), T., 427; P., 119.
action of allylene on solutions of (BILTZ and MUMM), A., i, 2.
interference of, with the formation of arsenic, antimony, and phosphorus hydrides (VITALI), A., ii, 354.
ammono-basic haloids (FRANKLIN), A., ii, 582.
iodide, action of, on sulphuric acid and mercury sulphates (DITTE), A., ii, 391.
alkali iodides (DUBOIN), A., ii, 637.
silver iodide, molecular weight of (HERZ and KNOCH), A., ii, 822.
nitride (FRANKLIN), A., ii, 582.

Mercury:—
Mercuric oxide, compounds of ketones and aldehydes with (AULD and HANTZSCH), A., i, 742.
sulphide, fusibility of, with antimony sulphide (PÉLABON), A., ii, 435. See also Cinnabar.
nitrite (RÂY), T., 173.
Mercurous chloride, reduction of, by silver (BRÖNSTED), A., ii, 133.
fluoride and its compound with ammonia (BÖHM), A., ii, 249.
nitrite, theory of the production of, and of its conversion into various mercury nitrates (RÂY), T., 171.
oxybromide, oxychloride, and oxyiodide (FISCHER and v. WARTENBERG), A., ii, 456.
Mercury organic compounds (BILTZ and MUMM; HOFMANN), A., i, 2; (FRANÇOIS), A., i, 373; (LEYS), A., i, 433.
explosive (HOFMANN), A., i, 513.
decompositions of, with alkali sulphites and sulphur chloride (HOFMANN and FEIGEL), A., i, 867.
Mercury cyanide, condensation of, with ketones (MARSH and STRUTHERS), T., 1878; P., 248.
diphenyl, toxicology of (LOUISE and MOUTIER), A., ii, 601.
nitroform (LEY), A., i, 316.
thiocyanate, formation of complex compounds with (GROSSMANN), A., ii, 249.
thiocyanate complexes (SHERRILL and SKOWRONSKI), A., i, 265.
Mercuric cyanide, evaluation of officinal (RUPP), A., ii, 867.
zinc cyanide, constitution of (DOTT), A., i, 695.
Mercuriacetaldehyde, *tri*chloro-, formation of (BRAME), T., 427; P., 119.
Mercury detection and estimation:—
detection and estimation of minute quantities of (ZENGELIS), A., ii, 65.
detection and estimation of traces of, in urine with the aid of the Nernst balance (JÄNECKE), A., ii, 66.
estimation of, titrimetrically (RUPP), A., ii, 484.
estimation of, electrolytically, in cinnabar (SMITH), A., ii, 860.
estimation of, in organic mercury compounds (RUPP and NÖLL), A., ii, 285.
estimation of, in organs (SCHUMM), A., ii, 286.
Mercury arc lamp. See under Electrochemistry.
Mesityl oxide (*methyl* iso*butenyl ketone*, iso*propylideneacetone*), condensation of, with benzil (JAPP and KNOX), T., 673; P., 152.
compound of, with mercuric chloride (ERDMANN), A., i, 18.
ozonide (HARRIES and TÜRK), A., i, 413.
Mesitylene (1:3:5-*trimethylbenzene*), latent heat of evaporation of (BROWN), T., 268; P., 75.
Mesitylic acid, *o*- and *p*-amino-, methyl esters (MEYER), A., i, 137.
Mesoporphyrin, compounds of, with iron and manganese (ZALESKI), A., i, 105.
Mesoxaldialdehyde and its hydrate (HARRIES and TÜRK), A., i, 414.
preparation of (HENLE and SCHUPP), A., i, 413.
Mesoxalic acid and semialdehyde, preparation of (FENTON), T., 813; P., 168.
phenylhydrazone, methyl ester, and its derivatives (BÜLOW and GANGHOFER), A., i, 90.
Mesoxalic acid, esters, preparation of, and condensation of, with cyanoacetic esters (SCHMITT), A., i, 508.
derivatives of (SCHMITT), A., i, 585.
ethyl ester, preparation of (CURTISS), A., i, 507.
Metabolism, nitrogenous products of, and their relation to carbohydrates (KNOOP and WINDAUS), A., i, 509.
behaviour of *p*-dimethylaminobenzaldehyde in (JAFFÉ), A., ii, 186.
gelatin in (KAUFFMANN), A., ii, 735.
of sulphur and phosphorus on an abundant proteid diet (BORNSTEIN), A., ii, 99.
in man (v. WENDT; GUMPERT), A., ii, 840.
in cystinuria (ALSBERG and FOLIN), A., ii, 544.
in osteomalacia (GOLDTHWAIT, PAINTER, OSGOOD, and MCCRUDDEN), A., ii, 845.
carbohydrate, influence of surgical operations on (PFLÜGER, SCHÖNDORFF, and WENZEL), A., ii, 44.
in partially depancreated dogs (COBB), A., ii, 540.
phosphorus, in man (TIGERSTEDT), A., ii, 332.
proteid. See Proteid metabolism.
See also Katabolism.
Metabolism experiments, cage for (GIES), A., ii, 839.
Metachloroantimonic acid. See under Antimony.

Metalammonium compounds, action of, on halogen derivatives of methane and on alcohols (CHABLAY), A., ii, 502.
use of, in organic chemistry (LEBEAU), A., i, 401, 512.
See also under the separate Metals and Metalloids.
Metallic bases, equilibrium among certain, in simultaneous contact with phosphoric acid (QUARTAROLI), A., ii, 821.
carbonates, behaviour of, towards saturated solutions of potassium and ammonium carbonates (ARNOLD), A., ii, 356.
chlorides, anhydrous, transformation of oxides and oxygenated metallic salts into (MATIGNON and BOURION), A., ii, 459.
molecular weights of (RÜGHEIMER and RUDOLFI), A., ii, 576.
action of weak acids on (BENRATH), A., i, 734; ii, 705.
compounds, triboluminescence of (GERNEZ), A., ii, 431.
action of sodium thiosulphate on, in the dry way (FAKTOR), A., ii, 452, 812.
binary, preparation of, by means of aluminium powder (COLANI), A., ii, 525; (MATIGNON and TRANNOY), A., ii, 588.
cyanides, action of, on organic bases (STRUTHERS), P., 95.
action of, on organic haloids (SIDGWICK), P., 120.
haloids, compounds of, with hydroxylamine (ANTONOFF), A., ii, 709.
hydroxides, solubility of, in glycerol (MÜLLER), A., i, 254.
condition in which chlorine exists in colloidal solutions of (RUER), A., ii, 169.
behaviour of, towards saturated solutions of potassium and ammonium carbonates (ARNOLD), A., ii, 356.
oxides, method for determining the presence of (TICHBORNE), A., ii, 556.
and sulphides occurring naturally, electrical conductivity and absorptive power for heat radiations of (KÖNIGSBERGER and REICHENHEIM), A., ii, 624.
action of potassium thiocyanate on, at high temperatures (MILBAUER), A., i, 121.
reduction of, by aluminium carbide (PRING), T., 1530; P., 230.
Metallic oxides, reduction of, by means of the cerite metals (WEISS and AICHEL), A., ii, 164.
salts, diffusion of, in solution (GRAHAM), A., ii, 147.
action of sodium hyposulphite on (BRUNCK), A., ii, 95.
double, formation and solubility of (KOPPEL, WETZEL, and GUMPERZ), A., ii, 689.
solubility and dissociation of, in water (RIMBACH and GREWE), A., ii, 375.
inorganic. See Inorganic salts.
See also salts.
Metalloids of the first three families, some properties of the hydrides of (DE FORCRAND), A., ii, 696.
Metals found in Egyptian tombs (BERTHELOT), A., ii, 164.
electrolytic deposition of (AMBERG), A., ii, 7; (FISCHER and BODDAERT), A., ii, 206; (KOLLOCK and SMITH), A., ii, 859.
cathode potentials necessary for the electrolytic deposition of, from solutions of their sulphates (COFFETTI and FOERSTER), A., ii, 796.
preparation of, by means of the cerite metals (WEISS and AICHEL), A., ii, 164.
spectra of the, in the electric arc (HASSELBERG), A., ii, 129.
emission spectra of, in the electric furnace (KING), A., ii, 217.
flame spectra of (DE WATTEVILLE), A., ii, 2.
radioactivity of common (RIGHI), A., ii, 431.
spontaneous action of, on sensitive films of photographic plates without direct contact (KAHLBAUM and STEFFENS), A., ii, 295.
action of radium bromide on the electrical resistance of (SABAT), A., ii, 219.
electromotive force between, and solutions of their salts in water and methyl alcohol (CARRARA and D'AGOSTINI), A., ii, 370.
vaporisation of, at the ordinary temperature (ZENGELIS), A., ii, 143.
lowest temperature of evaporation of, in the vacuum of the cathode light (KRAFFT and BERGFELD), A., ii, 144.
theory of the solution of, in potassium cyanide solution under the influence of an alternating current (BROCHET and PETIT), A., ii, 27, 28, 261.
chemical solution pressure of, and the chemical transfer of metallic potentials (FISCHER), A., ii, 501.

Metals, reciprocal replacement of, in aqueous solution (FERNEKES), A., ii, 33; (SMITH), A., ii, 164, 450.
alteration of the specific gravity of, owing to deformation (KAHLBAUM and STURM), A., ii, 680.
colours in (GARNETT), A., ii, 783.
passivity of (LE BLANC), A., ii, 137.
theory of the action of, on nitric acid (DIVERS), A., ii, 84.
explanation of the action of strong sulphuric acid on (VAN DEVENTER), A., ii, 383.
oxidation of, in the cold in presence of ammonia (MATIGNON and DESPLANTES), A., ii, 322.
influence of, on fermenting liquids (NATHAN, SCHMID, and FUCHS), A., ii, 340, 847.
ductile, influence of phase changes on the tenacity of, at the ordinary temperature and at the boiling point of liquid air (G. T. and H. N. BEILBY), A., ii, 803.
finely divided, use of, in hydrogenation and in molecular reactions (SABATIER and SENDERENS), A., i, 333.
general methods of hydrogenation and decomposition based on the use of (SABATIER and SENDERENS), A., i, 401; (MAILHE), A., i, 501.
heavy, complex compounds of carbonic acid with (LUTHER and KRSNJAVI), A., ii, 705.
organic compounds of, in plants (SCHLAGDENHAUFFEN and REEB), A., ii, 51.
microscopic examination of (JENKINS and RIDDICK), A., ii, 118.
the processes of double decomposition for the industrial separation of (HERRENSCHMIDT), A., ii, 41.
separation of, by means of hydroxylamine (JANNASCH and RÜHL; JANNASCH and COHEN), A., ii, 612; (JANNASCH and SCHILLING; JANNASCH), A., ii, 613; (FRIEDHEIM and HASENCLEVER), A., ii, 766.
separation of, by volatilisation in a current of hydrochloric acid gas (FRIEDHEIM and JACOBIUS), A., ii, 652.
Metal vegetation (HOLTZ), A., ii, 670.
Metanicotine, reduction of (MAASS), A., i, 543.
Metapilocarpine and its additive salts (PINNER), A., i, 659.
Metasaccharinic acid, constitution of (KILIANI and LOEFFLER), A., i, 737.
Metasaccharopentose and its phenylbenzylhydrazone (KILIANI and LOEFFLER), A., i, 737.
Metatitanic acid. See under Titanium.
Metazirconic acid. See under Zirconium.
Metazoa, reversal of ciliary movement in (PARKER), A., ii, 183.
Metellagic acid and its acetyl derivative (PERKIN and NIERENSTEIN), T., 1426; P., 186.
Meteoric iron, the Billings (WARD), A., ii, 263.
Meteorite, Cañon Diablo, investigation of the (MOISSAN), A., ii, 43, 247.
Mount Vernon (TASSIN), A., ii, 399.
Rodeo (FARRINGTON), A., ii, 726.
Shelburne (BORGSTRÖM), A., ii, 726.
Meteorites, Barraba, Cowra, and Mount Dyrring (MINGAYE), A., ii, 399.
of Hvittis and Marjalahti (BORGSTRÖM), A., ii, 537.
Methæmoglobin, spectroscopy of (VILLE and DERRIEN), A., i, 399, 500, 622; (PIETTRE and VILA), A., i, 622.
a fluorine compound of (VILLE and DERRIEN), A., i, 500, 622; (VILA and PIETTRE), A., i, 847.
absorptiometric estimation of the amount of nitric oxide combined by unit weight of (V. HÜFNER and REINBOLD), A., i, 252.
Methane, some constants of pure (MOISSAN and CHAVANNE), A., i, 253.
solid, action of, on liquid fluorine (MOISSAN and CHAVANNE), A., i, 253.
halogen derivatives, action of metalammonium compounds on (CHABLAY), A., i, 502.
nitro-, condensation of, with alkylated aminomethyl alcohols (HENRY), A., i, 609, 661.
condensation of, with imines (MAYER), A., i, 357.
Methanedisulphonic acid, esters, anilide, and chloride, and compounds with bases (SCHROETER and HERZBERG), A., i, 851.
Methanesulphonic acid and its ethyl ester, chloride, and anhydride (BILLETER), A., i, 584.
hydroxy-, and its sodium salt (REINKING, DEHNEL, and LABHARDT), A., i, 261.
Methanesulphonylcarbimide (BILLETER), A., i, 560.
Methineammonium dyes (RUPE and SCHWARZ), A., i, 83.
Methionic acid. See Methanedisulphonic acid.

Methoethenylbenzene oxide. See Phenyl-methylethylene oxide.
Methoxyacetophenones, *m*- and *p*- (Eijkman, Bergema, and Henrard), A., i, 360.
Methoxy-acids, aromatic, formation of (Graebe), A., i, 699.
3-Methoxyacridone (Ullmann and Kipper), A., i, 597.
9-Methoxy-9-*iso*amyl-10-anthrone (Jüngermann), A., i, 795.
5-Methoxyaniline, *tri*bromo-, and 5-nitro-, and its acetyl derivative (Blanksma), A., i, 431.
6-*o*-Methoxyanilino-3-methoxybenzoic acid (Ullmann and Kipper), A., i, 597.
***o*-Methoxybenzaldehyde,** condensation of, with glycine (Erlenmeyer and Bade), A., i, 131.
action of nitrogen sulphide on (Davis), T., 1834; P., 258.
***p*-Methoxybenzeneazobenzene,** *p'*-nitro- (Schmidt), A., i, 951.
3-Methoxybenzoic acid, 6-chloro-, reactions of (Ullmann and Kipper), A., i, 596.
Methoxybenzoquinone, chloro*di*hydroxy- (Graebe and Hess), A., i, 698.
4-*p*-Methoxybenzoylfluorenone (Pick), A., i, 68.
β-Methoxybenzoyl-α-phenylthiolstyrene (Ruhemann), T., 467; P., 123.
Methoxybenzyl alcohol, *di*chloro-*di*bromo- (Zincke and Buff), A., i, 881.
***o*-Methoxybenzylamine** and its salts (Erlenmeyer and Bade), A., i, 131.
***p*-Methoxybenzyldibenzyl ketone.** See αγ-Diphenyl-δ-*p*-methoxyphenyl-β-butanone.
α-Methoxybenzylideneacetophenone (Sluiter), A., i, 796.
***m*-Methoxybenzylideneaniline,** *p*-hydroxy- (Ott), A., i, 376.
***p*-Methoxybenzylideneaniline** (Ott), A., i, 376.
***p*-Methoxybenzylidenehippuric acid** and its methyl ester, amide, imide, and piperidide (Erlenmeyer and Wittenberg), A., i, 240.
Methoxybenzylidenemalononitrile (Hinrichsen and Lohse), A., i, 132.
***m*-Methoxybenzylidenephenylhydrazines,** *p*-hydroxy- (Ott), A., i, 376.
***p*-Methoxybenzylidenephenylhydrazines** (Ott), A., i, 376.
***m*-Methoxybenzylidenesemicarbazide,** *p*-hydroxy- (Ott), A., i, 376.
3-Methoxychalkone, 2'-hydroxy- (Gutzeit and v. Kostanecki), A., i, 366.
β-Methoxy-αα-*di*chloropropylene (Vitoria), A., i, 110.
3-Methoxycoumaranone (Blom and Tambor), A., i, 916.
2-Methoxy-4-cyanobenzyl-α-naphthol and its acetate (Sachs and Craveri), A., i, 910.
2-Methoxydibenzyl (v. Kostanecki, Rost, and Szabrański), A., i, 341.
α-Methoxydihydro*iso*safrole, bromo-derivatives (Hoering), A., i, 903.
3-Methoxy-4-dimethylaminoethoxyphenanthrene and its additive salts and methiodide (Knorr), A., i, 813.
α-Methoxy-αγ-diphenylbutane, *βδ-di*nitro-, and its monophenylhydrazone and tribromo-derivative (Meisenheimer and Heim), A., i, 269.
δ-Methoxy-αγ-diphenyl-δ-*p*-methoxy- and **-δ-*mp*-methylenedioxyphenyl-β-butanones** (Hertzka), A., i, 291.
4-Methoxy-1-ethylphthalazine (Daube), A., i, 210.
3'-Methoxy-flavanone, 3-*iso*nitroso- and **-flavonol** and its acetyl derivative (Gutzeit and v. Kostanecki), A., i, 366.
4'-Methoxy-flavanone and 3-*iso*nitroso-, and **-flavonol** and its acetyl derivative (Edelstein and v. Kostanecki), A., i, 460.
Methoxy-Δ²-*cyclo*hexene (Brunel), A., i, 869.
Methoxymethylenedioxyphenylamino-acetone and its picrate and **-nitro-acetone** (Rimini), A., i, 199.
Methoxy-3':4'-methylenedioxystilbenes, 2- and 4- (v. Kostanecki and Sulser), A., i, 352.
Methoxy-3':4'-methylenedioxystilbene-β-carboxylic acids, 2-, 3-, and 4- (v. Kostanecki and Sulser), A., i, 352.
3-Methoxy-2-methyl-4-pyridone (Peratoner and Tamburello), A., i, 808.
8-Methoxy-1-methylquinolone, bromo-derivatives (Howitz and Witte), A., i, 470.
Methoxymethyltetrahydroanthraquinone, *di*hydroxy- (Tschirch and Cristofoletti), A., ii, 852.
4-Methoxy-2-methylthiolpyrimidine, 6-amino- (Johnson and Johns), A., i, 836.
2-Methoxynaphthaxanthone (Ullmann and Kipper), A., i, 597.
***p*-Methoxyphenyl benzyl sulphide** (Taboury), A., i, 644.
Methoxyphenyl ethyl carbonate, *o*-amino-, and its acetyl derivative and carbamide, and *o*-nitro- (A. and L. Lumière and Perrin), A., i, 588.

p-**Methoxyphenyl-aminoacetone**, hydrochloride and picrate of, and **-nitroacetone** (RIMINI), A., i, 198.
o-**Methoxyphenylcarbamic acid**, ethyl ester (PSCHORR and EINBECK), A., i, 590.
p-**Methoxyphenyl*tri*chloromethylcarbinol** and its acetate (DINESMANN), A., i, 645.
α-**Methoxy-α-phenylethane**, β-nitro- (MEISENHEIMER and HEIM), A., i, 269.
p-**Methoxyphenylethyl alcohol** and its phenylurethane (GRIGNARD), A., i, 594.
p-**Methoxyphenylethylcarbinol** and its ether (HELL and HOFMANN), A., i, 58; (KLAGES), A., i, 344, 645; (HELL), A., i, 436.
Methoxyphenylethylcarbinols, *o*- and *p*- (HELL and HOFMANN), A., i, 435.
o-**Methoxyphenylmethylcarbinol** (PSCHORR and EINBECK), A., i, 590.
3-Methoxy-1-phenyl-5-methylpyrazole (ψ-3-*antipyrine*) (MICHAELIS and MEYER), A., i, 378.
γ-*p*-**Methoxyphenylpropane-αγ-diol** (*anethoglycol*) and its acetates (VARENNE and GODEFROY), A., i, 282.
o-**Methoxyphenylpropionic acid**, methyl ester and hydrazide (PSCHORR and EINBECK), A., i, 590.
p-**Methoxyphenylpyruvic acid** and its phenylhydrazone and condensation with benzaldehyde (ERLENMEYER and WITTENBERG), A., i, 240.
o-**Methoxyphenylserine** and its salts (ERLENMEYER and BADE), A., i, 131.
5-Methoxy-1-phenyl-1:2:3-triazole-4-carboxylic acid, *p*-bromo-, ethyl ester (DIMROTH and STAHL), A., i, 386.
3-Methoxy-4-pyridone (PERATONER and TAMBURELLO), A., i, 808.
2-Methoxypyrimidine (FARBENFABRIKEN VORM. F. BAYER & CO.), A., i, 159.
3-Methoxy-γ-pyrone (PERATONER and SPALLINO), A., i, 806.
8-Methoxyquinoline, bromo-derivatives, and their methiodides (HOWITZ and WITTE), A., i, 470.
2-Methoxystilbene and its β-**carboxylic acid** (FUNK and v. KOSTANECKI), A., i, 352.
3-Methoxystilbene-β-carboxylic acid (FUNK and v. KOSTANECKI), A., i, 352.
o-**Methoxystyrene** (PSCHORR and EINBECK), A., i, 590.
5-Methoxy-1-*p*-tolyl-1:2:3-triazole-4-carboxylic acid, ethyl ester (DIMROTH and STAHL), A., i, 385.
5-Methoxytritanic acid, 3-hydroxy-, and its lactone (v. LIEBIG), A., i, 782.
Methoxyxanthones, 2- and 4- (ULLMANN and ZLOKASOFF), A., i, 598.
2-Methoxy-*p*-xylene, 3:5-*di*- and *tri*-nitro- (BLANKSMA), A., i, 426.
2-Methoxy-*p*-xylidine, 3-nitro-, and its 6-**sulphonic acid** (BLANKSMA), A., i, 426.
Methyl alcohol, compounds of, with bromine and chlorine (MCINTOSH), T., 784; P., 64, 120.
detection of (SCUDDER), A., ii, 615.
estimation of, in presence of formaldehyde (LEFFMANN), A., ii, 864.
estimation of, in formaldehyde (GNEHM and KAUFLER), A., ii, 209.
and ethyl alcohol, estimation of, in tinctures by the immersion refractometer (LEACH and LYTHGOE), A., ii, 655.
Methyl alcohol, amino-, condensation of nitromethane with alkyl derivatives of (HENRY), A., i, 609, 661.
Methyl bromide, preparation of (STEINKOPF and FROMMEL), A., i, 501; (WEINLAND and SCHMID), A., i, 557.
chloride, preparation of (WEINLAND and SCHMID), A., i, 558, 850.
boiling point of (GIBBS), A., ii, 570.
and carbon dioxide, validity of the law of corresponding states for mixtures of (KAMERLINGH ONNES and ZAKRZEWSKI), A., ii, 149.
ether, compounds of, with bromine and chlorine (MCINTOSH), T., 788; P., 64, 120.
hydrogen sulphite, amino-, and its zinc salt (REINKING, DEHNEL, and LABHARDT), A., i, 261.
iodide, preparation of (WEINLAND and SCHMID), A., i, 557.
iodochloride (THIELE and PETER), A., i, 735.
*iso*propyl ethers, chloro-derivatives (STAPPERS), A., i, 261.
sulphate, esterification of, by means of (GRAEBE), A., i, 678.
Methylacetal, bromo- (FREUNDLER and LEDRU), A., i, 326.
Methylacetone. See Methyl ethyl ketone.
p-**Methylacetophenone** and its semicarbazone (AUWERS), A., i, 434.
Methylacetophenones, *o*- and *p*- (EIJKMAN, BERGEMA, and HENRARD), A., i, 360.

5-Methylacridine and its salts (DECKER and KLAUSER), A., i, 667.
action of, on benzaldehyde and on *m*-nitrobenzaldehyde (FRIEDLÄNDER), A., i, 829.
Methylacrylic acid and its anilide and its dibromide (AUTENRIETH and PRETZELL), A., i, 629.
β-Methyladipic acid, esters, rotation of (HALLER and DESFONTAINES), A., ii, 429.
δ-amino-, and its copper salt (DIECKMANN), A., i, 417.
γ-Methyladipic acid, α-amino-, *N*-benzoyl derivative of (DIECKMANN), A., i, 418.
Methyladipic acids, α- and β- (PERKIN and TATTERSALL), T., 1085.
γ-Methyl-α-alkyladipic acids, esters, rotation of (HALLER and DESFONTAINES), A., ii, 429.
1-Methyl-4-alkyl-3-*cyclo*hexanols, synthesis of, and their phenylcarbamates (HALLER and MARCH), A., i, 276.
1-Methyl-4-alkyl-3-*cyclo*hexanones and their semicarbazones and the corresponding phenols (HALLER), A., i, 214.
4-Methyl-1-alkyl-2-*cyclo*pentanonecarboxylic acids, esters, rotation of (HALLER and DESFONTAINES), A., ii, 429.
Methylallylglutaconimide, cyano-, and its metallic derivatives (GUARESCHI), A., i, 823.
Methylallyltetrahydroquinaldinium iodide (WEDEKIND), A., i, 521.
Methylamine, boiling point of (GIBBS), A., ii, 570.
action of, on cæsium (RENGADE), A., i, 174.
action of, on furfuraldehyde (LITTERSCHEID), A., i, 76.
iodomercurates and chloroiodomercurate of (FRANÇOIS), A., i, 574.
Methylaminoacetylcatechol (DAKIN), P., 154.
1-Methylaminoanthraquinone, 2- and 4-nitro- (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 362.
α-Methylaminoanthraquinone (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 145.
***o*-Methylaminobenzaldehyde**, physical constants of (SCHMIDT), A., i, 213.
***o*-Methylaminobenzoic acid.** See Methylanthranilic acid.
***p*-Methylaminobenzoic acid** and its salts and nitroso-derivative (JAFFÉ), A., i, 344.
and its methyl ester (JOHNSTON), P., 156.
1-Methylamino-2:5-dimethylpyrrole-3:4-dicarboxylic acid (BÜLOW, RIESS, and SAUTERMEISTER), A., i, 661.
Methylaminoethyl alcohol and **ether**, melting point, specific gravity, and refractive index of (KNORR and MEYER), A., i, 748.
Methylaminoethyl ether and its salts (KNORR and MEYER), A., i, 748.
2-Methylamino-4-methylthiazole (YOUNG and CROOKES), P., 308.
α-Methylamino-β-*aci*-*di*nitroethane (DUDEN, BOCK, and REID), A., i, 568.
8-Methylaminoparaxanthine (BOEHRINGER & SÖHNE), A., i, 230.
2-Methylaminophenetole, 3:5-*di*nitro-, and its nitroamine (BLANKSMA), A., i, 431.
3-Methylamino-1-phenyl-5-β-naphthylpyrazole (MICHAELIS and HEPNER), A., i, 481.
γ-Methylamino-β-phenylpropyl alcohol and its additive salts (FOURNEAU), A., i, 57.
2-Methylamino-*p*-xylene, 3:5-*di*nitro-, and its nitroamine (BLANKSMA), A., i, 426.
Methyl*iso*amylamine, preparation of (CLARKE), A., i, 428.
α-Methyl-γ-*n*-amylbutyrolactone, hydrazine compound of (BLAISE and LUTTRINGER), A., i, 330.
β-Methylanhydroacetonebenzil, preparation of (JAPP and KNOX), T., 677.
Methylaniline, influence of temperature on the action of acetyl thiocyanate on (DORAN and DIXON), T., 339; P., 77.
Methylanilinoazobenzene (VIGNON and SIMONET), A., i, 494.
γ-Methylanilino-Δβ-propene-α-al, β-chloro- (DIECKMANN and PLATZ), A., i, 117.
Methylanthranil, Heller's, physical constants of (SCHMIDT), A., i, 213.
Methylanthranilic acid, methyl ester, physical constants of (SCHMIDT), A., i, 213.
ω-cyano-, preparation of (BADISCHE ANILIN- & SODA-FABRIK), A., i, 645.
2-Methylanthranol, iodo-hydriodo-derivatives (LIEBERMANN and MAMLOCK), A., i, 531.
Methylanthraquinone, *tri*hydroxy-. See Nataloe-emodin.
Methylarsonic acid, alkaloidal salts (VITALI), A., i, 657.
Methylation of hydrogen atoms attached to nitrogen by means of formaldehyde (ESCHWEILER; KOEPPEN), A., i, 328.

Methylazoimide (DIMROTH and WISLICENUS), A., i, 422.
C-**Methylbarbituric acid**, preparation of (GERNGROSS), A., i, 942.
3-Methylbarbituric acid and 4-imino- (CONRAD), A., i, 751.
5-Methylbarbituric acid (FISCHER), A., i, 122.
Methylbenzamide, hydroxy-, and its compound with β-naphthol and hydrochloric acid (EINHORN), A., i, 344, 345, 646.
3-Methylbenzil, 4-hydroxy- (BLAU), A., i, 905.
1-Methylbenziminazole and its salts (FISCHER and VEIEL), A., i, 245.
2-Methylbenziminazole, nitro-, yellow sulphur dye from (CHEMISCHE FABRIKEN VORM. WEILER-TER-MEER), A., i, 552.
Methylbenzophenonesulphones, 3- and 5- (ULLMANN and LEHNER), A., i, 290.
4-Methyl-1:2-benzopyrone-3-benzoyl-*o*-carboxylic acid (*4-methyl*-1:2-*benzopyrone*-3-*o*-*phthalaldehydic acid*), 7-hydroxy-, and its acetate, and 5:7- and 7:8-*di*hydroxy- (BÜLOW and SIEBERT), A., i, 294.
4-Methyl-1:2-benzopyrone-3-*o*-benzylcarboxylic acid, 7-hydroxy-, and its acetate, and 5:7- and 7:8-*di*hydroxy- (BÜLOW and SIEBERT), A., i, 295.
Methyl benzoylmethylaminobutyl ketone (LIPP and WIDNMANN), A., i, 662.
4-*p*-Methylbenzylfluorene (PICK), A., i, 68.
***m*-Methylbenzyltoluidine**, 6-amino-. See *m*-Xylyl-*p*-toluidine, *o*-amino-.
***m*-Methylbenzyl-*p*-toluidine**, *o*-hydroxy-, and its picrate (v. WALTHER and BAMBERG), A., i, 299.
Methylbromoethylamine hydrobromide (KNORR and MEYER), A., i, 748.
β-Methyl-α-bromomethylbutyric acid, α-bromo- (BLAISE and LUTTRINGER), A., i, 628.
γ-Methylbutane, ββ-*di*chloro-αδ-*di*hydroxy- (SMIRNOFF), A., i, 173.
Methyl *iso*butenyl ketone. See Mesityl oxide.
Methylbutylacetic acid. See α-Methylhexoic acid.
Methyl-*n*- and -*iso*-butylglutaconimides, cyano-, ammonium derivatives of (GUARESCHI), A., i, 822.
Methyl butyl ketone, semicarbazone of (BOUVEAULT and LOCQUIN), A., i, 18.
Methyl *iso*butyl ketone, condensation of, with benzil (JAPP and KNOX), T., 673; P., 152.
Methyl *tert.*-butyl ketone. See Pinacolin.
Methylbutylmalonic acid and its esters (RASETTI), A., i, 561.
Methyl*tert.*-butyl*di*nitromethane (SCHOLL, WEIL, and HOLDERMANN), A., i, 182.
α-Methyl-δ-*n*-butylvalerolactone, hydrazine compound of (BLAISE and LUTTRINGER), A., i, 330.
α-Methylbutyric acid, Marckwald's asymmetric synthesis of (TIJMSTRA), A., i, 257.
α-Methylbutyrolactone, hydrazine compound of (BLAISE), A., i, 681.
γ-Methylbutyrolactone, hydrazine compound of (BLAISE and LUTTRINGER), A., i, 329.
α-Methylbutyrylcarbamide, properties of (FISCHER and DILTHEY), A., i, 38.
Methylcamphenilol (MOYCHO and ZIENKOWSKI), A., i, 712.
reactions of (BOUVEAULT and BLANC), A., i, 222; (MOYCHO and ZIENKOWSKI), A., i, 654.
Methylcamphoformeneamine and its **carboxylic acid**, methylamine salt (TINGLE and HOFFMANN), A., i, 800.
1-Methylcarbamido-2:5-dimethylpyrrole-3:4-dicarboxylic acid and its ethyl ester, preparation of (BÜLOW, RIESS, and SAUTERMEISTER), A., i, 661.
Methylchavicol α- and β-nitrosites (RIMINI), A., i, 198.
Methylchloroacetamide, hydroxy- (EINHORN), A., i, 345.
Methylchloroethylamine salts (KNORR and MEYER), A., i, 748.
4-Methyl-4-*di*chloromethyl-1-ethyldihydrobenzene (AUWERS), A., i, 434.
1-Methyl-4-*di*chloro*iso*propylbenzene (AUWERS), A., i, 434.
Methylcinchonine, *iso*nitroso-, and its additive salts (ROHDE and SCHWAB), A., i, 228.
Methylcinene and its hydrobromide (RUPE and SCHLOCHOFF), A., i, 415.
Methylconiine and its additive salts (v. BRAUN), A., i, 812.
Methylcreatinine and its additive salts (KORNDÖRFER), A., i, 152.
β-Methylcrotonic acid, γ-cyano-, ethyl ester (ROGERSON and THORPE), T., 1687.
2-Methyldeoxybenzoin, 4-hydroxy- (BLAU), A., i, 906.
3-Methyldeoxybenzoin, 4-hydroxy-, and its bromo-, iodo-, and acetyl derivatives and its oxime (BLAU), A., i, 905.

Methyldiacetonealkamine aurichloride (KOHN), A., i, 929.

3-Methyldiallyl*cyclo*hexanone (HALLER), A., i, 214.

1-Methyl-5:5-diethylbarbituric acid (FISCHER and DILTHEY), A., i, 37; (CONRAD and ZART), A., i, 753.

Methyl-5:5-diethylbarbituric acids, 1- and 3-, 4-imino- (CONRAD and ZART), A., i, 752, 755.

Methyldiethylsulphinium hydroxide in dogs' urine (NEUBERG and GROSSER), A., ii, 739.

α-Methyldihydroberberine and its salts (FREUND and BECK), A., i, 151.

2-Methyldihydroindole, formation of, and its benzoyl and benzenesulphonyl derivatives (v. BRAUN and STEINDORFF), A., i, 81, 156.

4′-Methyldihydro-4-stilbazole and its additive salts (DÜRING), A., i, 233.

4-Methyl-2:3-dihydrothiazole, 2-imino-, *N*-acetyl derivative of, silver derivative (YOUNG and CROOKES), P., 308.

Methyldiphenylsulphone-2-carboxylic acids, 2′- and 4′- (ULLMANN and LEHNER), A., i, 290.

Methylene *di*iodochloride (THIELE and PETER), A., i, 736.

Methyleneacetophenone, hydroxy-, *C*- and *O*-carbanilides of (DIECKMANN, HOPPE, and STEIN), A., i, 137.

Methylene-azure, physiological action of (UNDERHILL and CLOSSON), A., ii, 471.

Methylene-blue, physiological action of (UNDERHILL and CLOSSON), A., ii, 471.

Methylenecamphor, hydroxy-, action of magnesium methyl and ethyl iodides on (FORSTER and JUDD), T., 369; P., 116.

Methylenecatechol, *di*amino-, nitro-, and nitroamino- (HERZ), A., i, 779.

4:5-Methylenedioxyanthranilic acid, 3-nitro- (HERZ), A., i, 779.

3:4-Methylenedioxy-1-β-bromo-α-acetoxy-*n*-propylbenzene, nitro- (HOERING), A., i, 592.

Methylenedioxyindophenin (HERZ), A., i, 779.

6-Methylenedioxyisatin (HERZ), A., i, 779.

6:7-Methylenedioxy-2-methylquinoline, 4-hydroxy-, and its additive salts and acetyl derivative (HERZ), A., i, 779.

Methylenedioxyphenanthrazine (HERZ), A., i, 780.

α-3:4-Methylenedioxyphenylbutane-α-ol. See Piperonylpropylcarbinol.

α-3:4-Methylenedioxyphenyl-αβ-*di*bromo- and **-β-bromo-α-hydroxyethanes** (BARGER and JOWETT), T., 969; P., 205.

Methylenedioxyphenyl-α-cyanoacrylic acid, ethyl ester, bromo-derivative (PICCININI), A., i, 599.

3:4-Methylenedioxyphenyldi-2-methylindyl-, -indolidene-, and -1-ethylindylmethanes (FREUND and LEBACH), A., i, 666.

β-3:4-Methylenedioxyphenyl-β-hydroxyethylmethylamine and its salts (BARGER and JOWETT), T., 970; P., 205.

Methyleneoxyuvitic acid (CHEMISCHE FABRIK AUF AKTIEN), A., i, 703.

Methylenetannincarbamide (VOSWINKEL), A., i, 805.

Methylethylacraldehyde, condensation of, with isobutaldehyde (MORAWETZ), A., i, 262.

Methylethylaniline, ω-cyano- (BADISCHE ANILIN- & SODA-FABRIK), A., i, 340.

α-Methyl-γ-ethylbutyrolactone, hydrazine compound of (BLAISE and LUTTRINGER), A., i, 330.

Methylethyldimethylaminomethylcarbinol benzoate hydrochloride (*stovaine*), toxicity of (LAUNOY), A., ii, 49.

test for (ZERNIK), A., ii, 491.

Methylethyldi-ψ-quinol, *tetra*bromo- and *di*chloro*di*bromo- (ZINCKE and BUFF), A., i, 882.

β-Methyl-α-ethylglutaconic acid and its silver salt, anhydride, and anilic acid, and α-cyano-, ethyl ester (ROGERSON and THORPE), T., 1708; P., 239.

identity of, with β-methyl-γ-ethylglutaconic acid (THORPE), T., 1671; P., 239.

β-Methyl-β-ethylglycidic acid, ethyl ester (CLAISEN), A., i, 288.

β-Methyl-γ-ethyl-$\Delta^{\alpha\epsilon}$-hexadene. See Ethylallyl*iso*propenylmethane.

Methyl ethyl ketone (*methylacetone*), chlorination of (KLING), A., i, 172.

action of potassium hydroxide on a mixture of, with phenylacetylene (BORK), A., i, 774.

condensation of, with pyrogallol (FABINYI and SZEKI), A., i, 888.

Methylethyl ketone ammonia (THOMAE), A., i, 509.

β-Methyl-β-ethyl-lactic acid and its salts (MEBUS), A., i, 508.

2-Methyl-3-ethyl-4-methylene-1:4-benzopyran, 7-hydroxy-, hydrochloride and picrate of (BÜLOW and DEIGLMAYR), A., i, 149.

Methylethyloxalacetic acid, ethyl ester (MEBUS), A., i, 507.

1-Methyl-3-ethylpiperidine and its additive salts (LIPP and WIDNMANN), A., i, 610, 662.

4-Methyl-3-ethylpyridine, reduction of, with sodium and alcohol (KOENIGS and BERNHART), A., i, 824.

4-Methyl-5-ethylpyridine, 2:6-*di*hydroxy-, and its hydrochloride and benzoyl and isonitroso-derivatives (ROGERSON and THORPE), T., 1709; P., 239.

4-Methyl-3-ethylpyridine-5-carboxylic acid, 2:6-*di*hydroxy-, ethyl ester, and its hydrochloride (ROGERSON and THORPE), T., 1713.

Methylethylpyruvic acid and its salts and phenylhydrazone (MEBUS), A., i, 508.

and its ethyl ester and semicarbazone (BOUVEAULT and LOCQUIN), A., i, 636.

2-Methyl-1-ethyltetrahydroquinoline (SCHOLTZ and PAWLICKI), A., i, 473.

Methylethylthetine, *l*-menthyl ester, salts of, molecular rotations of (SMILES), T., 453; P., 93.

Methyleugenol *α*- and *β*-nitrosites (RIMINI), A., i, 199.

***β*-Methylgalactoside,** alkylation of (IRVINE and CAMERON), T., 902; P., 191.

Methylgalactosides, transformations of (JUNGIUS), A., i, 573.

***α*-Methylgeraniol** (FARBENFABRIKEN VORM. F. BAYER & CO.), A., i, 147.

***β*-Methylglucoside,** preparation of (MAQUENNE), A., i, 415; (ARMSTRONG and COURTAULD), A., i, 746.

alkylation of (IRVINE and CAMERON), T., 900; P., 191.

Methylglucosides, transformations of (JUNGIUS), A., i, 573.

***β*-Methylglutaconic acid,** formation of (DARBISHIRE and THORPE), T., 1714; P., 239.

its silver salt, anhydride, and anilic acid, and *α*-cyano-, ethyl ester (ROGERSON and THORPE), T., 1687; P., 239.

***β*-Methylglutaric acid** and its anhydride and *α*-bromo- and *α*-cyano-derivatives, ethyl esters (DARBISHIRE and THORPE), T., 1716, P., 239.

***δ*-Methylglycocyamidine** (KORNDÖRFER), A., i, 30.

Methylglyoxal, monoacetal, semicarbazone, and dipolymeride of (HARRIES and TÜRK), A., i, 413.

Methylglyoxaline. See Methyliminazole.

Methylglyoxalosotetrazone, formation of (DIECKMANN and PLATZ), A., i, 954.

***N*-Methylgranatanine** and its derivatives and ***ψ*-Methylgranatanine,** 3-chloro- (WILLSTÄTTER and VERAGUTH), A., i, 543.

Methylgranatoline and ***ψ*-Methylgranatoline** and their additive salts (WILLSTÄTTER and VERAGUTH), A., i, 544.

Methyl-guaiacolacetamide, *-p*-**hydroxybenzamide,** *-p*-**toluamide,** and *-iso*-**valeramide,** hydroxy- (EINHORN), A., i, 344.

Methyl*apo***harmine** and nitro-, and its **carboxylic acid** and their additive salts (FISCHER and BUCK), A., i, 229.

***β*-Methylheptane-*βζ*-diol** (RUPE and SCHLOCHOFF), A., i, 414.

Methylheptenol (RUPE and SCHLOCHOFF), A., i, 414.

Methylheptenone, cyclic bases from (WALLACH and RHOUSSOPOULOS), A., i, 818.

Methyl heptyl ketone, bromo- (JOWETT), P., 117.

***β*-Methyl-$\Delta^{\alpha\epsilon}$-hexadiene.** See Allyl*iso*propenylmethane.

1-Methyl*cyclo***hexane** and its haloid derivatives (MARKOWNIKOFF), A., i, 760.

1-, 2-, 3-, 4-, and *ω*-chloro-derivatives (SABATIER and MAILHE), A., i, 334.

1-Methyl-3-*cyclo***hexanol,** benzoate of (HALLER and MARCH), A., i, 771.

Methyl*cyclo***hexanone,** action of potassium hydroxide on a mixture of, with phenylacetylene (BERTROND), A., i, 775.

1-Methyl*cyclo***hexanone-2** (KAY and PERKIN), T., 1070.

oxidation of (MARKOWNIKOFF), A., i, 141.

1-Methyl*cyclo***hexanone-3** and its oxime and semicarbazone (PERKIN and TATTERSALL), T., 1088.

action of alkyl iodides on the sodium derivative of (HALLER), A., i, 214.

Methyl*cyclo***hexanones,** the three, and the corresponding methylcyclohexanols (SABATIER and MAILHE), A., i, 275.

1-Methyl-3-*cyclo***hexanoxide,** sodium derivative, action of aromatic aldehydes on (HALLER and MARCH), A., i, 771.

1-Methyl-Δ^6-*cyclo***hexene-5-one-2-carboxylic acid,** ethyl ester (*Hagemann's ester*), and its semicarbazone (RABE and RAHM), A., i, 348; (MERLING), A., i, 350.

***δ*-Methylhexenoic acid** (KNOEVENAGEL), A., i, 169.

***δ*-Methyl-Δ^{α}-hexenoic acid,** *α*-cyano- (KNOEVENAGEL), A., i, 169.

1-Methyl*cyclo***hexenylidene-3-cyanoacetic acid,** ethyl ester (KNOEVENAGEL and MOTTEK), A., i, 62.

α-Methylhexoic acid and its esters, amide, and chloride (RASETTI), A., i, 561.
bromo-, and its ethyl ester (BLAISE and LUTTRINGER), A., i, 628.
Methyl hexyl ketone, semicarbazone of (BOUVEAULT and LOCQUIN), A., i, 18.
1-Methyl-3-α-hydroxyethylpiperidine (LIPP and WIDNMANN), A., i, 663.
5-Methyliminazole (KNOOP and WINDAUS), A., i, 509.
4(or 5)-Methyliminazole, preparation of, from dextrose, and its salts (WINDAUS and KNOOP), A., i, 381.
2-Methylimino-3:4-dimethyl-2:3-dihydrothiazole hydriodide (YOUNG and CROOKES), P., 308.
4-Methylimino-1-methyl-5:5-diethylbarbituric acid (CONRAD and ZART), A., i, 753.
6-Methylindazole, 5:7-*di*nitro-, and its salts and acetyl derivative (ZINCKE and ELLENBERGER), A., i, 486.
1-Methylindole, 2-chloro-3-bromo- (MAZZARA and BORGO), A., i, 925.
2-Methylindole (*methylketole*), action of sulphuryl chloride on (MAZZARA and BORGO), A., i, 827.
6-amino-, and its **3-carboxylic acid**, ethyl ester, and their salts and acyl derivatives (REISSERT and HELLER), A., i, 60.
3-Methylindole (*scatole*), action of sulphuryl chloride on (MAZZARA and BORGO), A., i, 925.
pigments originating from, and the scatoxyl question (PORCHER and HERVIEUX), A., ii, 187, 740; (MAILLARD), A., ii, 271.
in the organism (GROSSER), A., ii, 470.
Methylindolecarboxylic acid, amino-, ethyl ester (REISSERT and HELLER), A., i, 60.
Methylketole. See 2-Methylindole.
Methylmalic acid, synthetical, resolution of (BURACZEWSKI and MARCHLEWSKI), A., i, 400.
Methylmalonic acid (iso*succinic acid*), ethyl hydrogen ester, and its potassium salt, amide, and chloride (MARGUERY), A., i, 507.
ethyl ester, action of, on aniline, *p*-toluidine, and *p*-aminophenol and its ethers (COMANDUCCI and LOBELLO), A., i, 271.
sodium derivative, action of, on ethyl chloroacetate (MICHAEL), A., i, 856.
Methylmalonylcarbamides. See Methylbarbituric acids.
α-Methylmannoside, alkylation of (IRVINE and MOODIE), T., 1462; P., 227.
Methylmeroquinine, derivatives of (RABE and RITTER), A., i, 811.
Methyl methylaminobutyl ketone and its oxime and semicarbazone and their hydrochlorides (LIPP and WIDNMANN), A., i, 662.
Methyl β-methyloctyl ketone and its semicarbazone (BOUVEAULT and LOCQUIN), A., i, 18.
Methylmorphimethine, formula of (KNORR), A., i, 814.
Methylmorphol, synthetical base from, and its behaviour towards reagents which decompose methylmorphimethine (KNORR), A., i, 813.
amino-, triacetyl derivative of, and its oxidation (VONGERICHTEN and WEILINGER), A., i, 542.
9-Methyl-αβ-naphthaphenazine and 8-amino-, and its additive salts and *N*-acetyl derivative, 8-amino-2-hydroxy-, and 8-amino-6-hydroxy- (ULLMANN and ANKERSMIT), A., i, 553.
Methyl-β-naphthylamine, ω-cyano- (BUCHERER), A., i, 438.
Methylnataloe-emodin and its pentabromide and diacetyl derivative (LÉGER), A., i, 532.
Methylnitrosolic acid, amino-, and its salts and benzoyl derivative (WIELAND), A., i, 421.
β-Methyl-nonoic acid, β-hydroxy-, and **-Δ^α^-nonenoic acid**, ethyl esters (BOUVEAULT and BLANC), A., i, 12.
γ-Methylnonyl alcohol (BOUVEAULT and BLANC), A., i, 12.
m-**Methylolbenzoic acid**. See *m*-Toluic acid, ω-hydroxy-.
Methyloxalacetic acid (ERLENMEYER and ARBENZ), A., i, 241.
Methyl*iso***oxazolone**, *iso*nitroso- (BOUVEAULT and WAHL), A., i, 257, 612; (HANTZSCH), A., i, 408.
δ-Methyloximino-αγ-diketoheptoic acid and its ethyl ester and sodium salt (DIELS and PLAUT), A., i, 509.
δ-Methylpentane, α-amino-, and its salts (SABATIER and SENDERENS), A., i, 268.
Methylpentanes, β- and γ-, and their nitro-derivatives (PONI and COSTACHESCU), A., i, 109.
1-Methyl-3-*cyclo***pentaneone-4-carboxylic acid**, esters, rotation of (HALLER and DESFONTAINES), A., ii, 429.
β-Methyl-α-pentanonoic acid. See Methylethylpyruvic acid.
Methylpentanonol. See γ-Keto-αβ-dimethylbutyl alcohol.

Methylpentosan, estimation of, in presence of pentosans (ELLETT and TOLLENS), A., ii, 210.

Methyl *β*-**phenylthiol**-*γ*-**benzylidenepropyl ketone** (RUHEMANN), T., 465.

Methylpinoneoxime and its benzoyl derivative and methyl ether (TILDEN and STOKES), T., 837 ; P., 183.

4-Methyl-2-piperidone-6-carboxylic acid and its salts (DIECKMANN), A., i, 418.

1-Methyl-3-piperyl methyl ketone. See 3-Acetyl-1-methylpiperidine.

β-**Methylpropane**, *β*-chloro-*α*-iodo-, and *α*-iodo-*β*-hydroxy-, methyl ether of (ISTOMIN), A., i, 165.

1-Methyl*cyclo***propane-2:3-dicarboxylic acid**, 2:3-*di*bromo-, methyl and ethyl esters (JONES), T., 1064 ; P., 216.

1-Methyl-Δ^2-*cyclo***propene-2:3-dicarboxylic acid**, methyl and ethyl esters, bromination of (JONES), T., 1062 ; P., 216.

o-**Methyl***iso***propenylbenzene** (KAY and PERKIN), T., 1071.

m-**Methyl***iso***propenylbenzene** (PERKIN and TATTERSALL), T., 1090.

p-**Methyl***iso***propenylbenzene** and its dibromo-derivative and nitrosochloride (PERKIN and PICKLES), T., 653.

Methylpropylcarbinol, *aci-di*nitro-, and its potassium salt (DUDEN and PONNDORF), A., i, 558.

2-Methyl-3-*iso***propyl-1:4-dihydroquinoxaline** and its additive salts and dinitroso- and dibenzoyl derivatives (EKELEY and WELLS), A., i, 613.

Methyl*iso***propyldiphenic acid**, mononitrile of (WERNER and PIGUET), A., i, 68.

3-Methyl-4-*iso***propylenepyrazolone** (WOLFF), A., i, 840.

Methyl-*n***-propylglutaconimide** and its ammonium derivative (GUARESCHI), A., i, 822.

α-**Methyl-***β*-*iso***propylglutaric acid** (NOYES and DOUGHTY), A., i, 321.

β-**Methyl-***β*-**propylglycidic acid**, ethyl ester (CLAISEN), A., i, 288.

Methyl propyl ketone, *α*-*iso*nitroso-, methyl ether of (DIELS and PLAUT), A., i, 509.

Methyl *iso***propyl ketone**, action of potassium hydroxide on a mixture of, with phenylacetylene (BORK), A., i, 774.

p-tolylhydrazone of (KONSCHEGG), A., i, 924.

Methyl *iso***propyl ketone**, chlorohydroxy-derivative, and its acetyl and phenylosazone compounds, and *di*chloro- (SMIRNOFF), A., i, 172.

2-Methyl-5-*iso***propylpyrrole** and its mercury compound (TSCHUGAEFF and SCHLOESINGER), A., i, 231.

α-**Methyl-***β*-**propylsuccinic acid** and its salts and imide (TSCHUGAEFF and SCHLOESINGER), A., i, 231.

5-Methylpyrazoline-1-carboxylamide (NEF), A., i, 4.

Methylpyrazolone, condensation of, with acetylacetone (WOLFF), A., i, 840.

3-Methylpyrazolone-4-*iso***propylenecarboxylic acid** and its ethyl ester, and isomeride (WOLFF), A., i, 839.

Methylpyrazylmethylpyrazolone (STOLLÉ), A., i, 839.

2-Methylpyridine (*α-picoline*), chlorination of (SELL), T., 799 ; P., 165.

3:4-*di*hydroxy-, and its hydriodide and acetyl derivative (PERATONER and TAMBURELLO), A., i, 808.

4-Methylpyridine (*γ-picoline*) (AHRENS), A., i, 232.

2:6-*di*hydroxy-, and its additive salts and dibenzoyl derivative, and **5-carboxylic acid**, ethyl ester, and their isonitroso-derivatives (ROGERSON and THORPE), T., 1688 ; P., 239.

2-Methylpyridine-6-carboxylic acid, hydriodide and methiodide of (TURNAU), A., i, 547.

1-Methyl-4-pyridone, hydroxy-, and its salts, and bromo-, chloro-, and nitro-derivatives (MAQUENNE and PHILIPPE), A., i, 80.

4-Methylpyrimidine, 2-cyanamino-6-hydroxy- (MERCK), A., i, 670.

5-Methylpyrimidine, amino-, chloro-, chloroamino-, and iodoamino-derivatives (GERNGROSS), A., i, 942.

2:4-*di*hydroxy-. See Thymine.

3-Methylpyrone (WILLSTÄTTER and PUMMERER), A., i, 458.

2-Methyl-6-pyrophthalone and its sodium and additive salts (SCHOLZE), A., i, 825 ; (EIBNER), A., i, 928.

1-Methylpyrrole, 2:5-*di*chloro-3:4-*di*bromo- (MAZZARA and BORGO), A., i, 659.

2-chloro-3:4:5-*tri*bromo- (MAZZARA and BORGO), A., i, 817.

Methylpyrroles, pyrogenic transformation of, into pyridine derivatives (PICTET), A., i, 545.

1-Methylpyrrolidine from nicotine (PICTET), A., i, 543.

Methylpyruvic acid and its phenylhydrazone (ERLENMEYER and ARBENZ), A., i, 241.

Methylquinazolines, 6- and 8-, 4-chloro- (GABRIEL and COLMAN), A., i, 944.

Methylquinnitrole, bromo-derivatives (ZINCKE and BUFF), A., i, 880.

Methyl-ψ-quinol, bromo- and chlorobromo-, and their acetyl derivatives (ZINCKE and BUFF), A., i, 880.

2-Methylquinoline (*quinaldine*), action of, on mono- and di-bromosuccinic esters (DUBREUIL), A., i, 14.

7-amino-, and its additive salts and acyl derivatives (ALBER), A., i, 235.

5-nitro-, and its methiodide and picrate (DECKER and REMFRY), A., i, 829.

6-Methylquinoline, 8-iodine-derivatives, and their additive salts (WILLGERODT and FRISCHMUTH), A., i, 547.

8-Methylquinoline, 3:ω-*di*bromo- and 3-bromo-ω-hydroxy-, and its phenyl ether (HOWITZ and SCHWENK), A., i, 471.

Methylquinolines, 6- and 8-, methonitrates of (DECKER, GADOMSKA, and GIRARD), A., i, 469.

1-Methylquinolinium 1-methosulphate and its dichromate and picrate, 8-nitro- (DECKER, GADOMSKA, SANDBERG, and STAVROLOPOULOS), A., i, 374.

2-Methylquinolinium alkyl sulphates, dyes from (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 548.

1-Methyl-2-quinolone, 6:8-*di*bromo-, 3-bromo-8-nitro-, and 6:8-*di*nitro- (DECKER, GADOMSKA, SANDBERG, and STAVROLOPOULOS), A., i, 374.

5-bromo-6-hydroxy- (HOWITZ and BÄRLOCHER), A., i, 375.

bromo- and chloro-6- and -8-hydroxy-derivatives (HOWITZ and WITTE), A., i, 470.

Methylsalicylamide, hydroxy- (EINHORN), A., i, 344, 646.

Methylsparteine (MOUREU and VALEUR), A., i, 716.

Methylstanniodoform (PFEIFFER and HELLER), A., i, 123.

4′-Methyl-4-stilbazole and its additive salts and reduction products (DÜRING), A., i, 233.

4′-Methyl-4-stilbazoline and its platinichloride (DÜRING), A., i, 233.

Methylsuccinamide, *di*hydroxy-, and its compounds with benzene and *p*-nitrophenol (EINHORN), A., i, 345.

Methylsuccinic acid (*pyrotartaric acid*), bromo-, and its anhydride (ILSKY), A., i, 323.

3-Methylsulphone-1-phenyl-5-methylpyrazole (MICHAELIS and HAHN), A., i, 379.

3-Methylsulphone-1-*o*- and -*p*-tolyl-5-methylpyrazoles (MICHAELIS and BEHRENS), A., i, 381.

α-Methyltetrahydroberberine (FREUND and MAYER), A., i, 657.

2-Methyltetrahydroquinoline-1-carboxylic acid, methyl ester (VAN DORP), A., i, 82.

Methyl*dicyclo*tetranetetracarboxylic acid, ethyl ester (JONES), T., 1063; P., 216.

Methylthebainone (*thebainone methyl ether*) and its methiodide (PSCHORR), A., i, 921.

Methylthebainonemethine and its derivatives (PSCHORR), A., i, 921.

action of acetic anhydride on, and decomposition of (KNORR and PSCHORR), A., i, 922.

Methylthiocarbamidoazotoluene (BUSCH and BERGMANN), A., i, 309.

5-Methylthiol-1:3-diphenyltriazole (WHEELER and STATIROPOULOS), A., i, 722.

2-Methylthiolpyrimidine, 6-amino- and 6-chloro- (WHEELER, BRISTOL, and JOHNSON), A., i, 483.

4:6-*di*amino-, 5-bromo-4:6-*di*amino-, 4-chloro-6-amino-, and 4-chloro-5-bromo-6-amino- (JOHNSON and JOHNS), A., i, 837.

2-Methylthiophen, influence of light and heat on the bromination and chlorination of (OPOLSKI), A., i, 367.

Methylthioxanthenol methyl ether (DECKER and v. FELLENBERG), A., i, 668.

Methylthujone and its semicarbazone (HALLER), A., i, 602.

Methyl-*p*-toluidine, ω-cyano- (BADISCHE ANILIN- & SODA-FABRIK), A., i, 438.

1-Methyl-1:2:4-triazole and its additive salts (PELLIZZARI and SOLDI), A., i, 672.

Methyltriazoleaminoxime (RINMAN), A., i, 389.

Methyltrimethyleneoxidedicarboxylic acid, chloro-, monoamide of (LEUCHS), A., i, 545.

α-Methylumbelliferone (MICHAEL), A., i, 563.

5-Methyluramil (FISCHER and DILTHEY), A., i, 37.

β-Methylvaleric acid, α-amino-, and α-oximino-, and their derivatives (BOUVEAULT and LOCQUIN), A., i, 636.

α-hydroxy-. See **β-Methyl-β-ethyllactic acid**.

9-Methylxanthenol (DECKER, BÜNZLY, and v. FELLENBERG), A., i, 668.

Methylxanthones (ULLMANN and ZLOKASOFF), A., i, 597.

Methylxylidine. See 2-Methylamino-*p*-xylene.

Methylyohimboaic acid and its reactions (SPIEGEL), A., i, 817.
Mezcaline, attempts to synthesize (HEFFTER and CAPELLMANN), A., i, 877.
Micro-balance, use of the, in analysis (JÄNECKE), A., ii, 66; (BRILL), A., ii, 198.
Micro-organisms, virulence and immunising power of (STRONG), A., ii, 843.
assimilation of free elementary nitrogen by (VOGEL), A., ii, 646, 750.
decomposition of calcium cyanamide by (LÖHNIS), A., ii, 412.
soil, action of, on ammonium sulphate and sodium nitrate (STUTZER and ROTHE), A., ii, 546.
See also Bacteria.
Micro-respirometer (THUNBERG), A., ii, 44.
Mikindani-caoutchouc. See under Caoutchouc.
Milk, human, variations in the amount of casein in (PATEIN and DAVAL), A., ii, 738.
fat in (ENGEL), A., ii, 468.
iron in (CAMERER), A., ii, 183.
cows', composition and analysis of (RICHMOND), A., ii, 869.
abnormal, composition of, and of its ash constituents (HASHIMOTO), A., ii, 735.
Lombardy, composition of (BILLITZ), A., ii, 361; (BERTOCCHI), A., ii, 477.
new constituent of (BISCARO and BELLONI), A., i, 671, 672.
effect of asparagine on the production of, and its constituents (PFEIFFER, EINECKE, and SCHNEIDER), A., ii, 757.
influence of fat and other substances on the production of, when given in addition to a scanty basal food (MORGEN, BEGER, and FINGERLING), A., ii, 649.
biological and biochemical studies on (KONING), A., ii, 273.
the decomposition phases of (KONING), A., ii, 473.
action of the rennet ferment on (LAQUEUR), A., ii, 848.
acidity of (KONING), A., ii, 647.
occurrence of ammonia in contaminated (TRILLAT and SAUTON), A., ii, 490.
catalase of (REISS), A., ii, 337.
origin of the fat in (CASPARI), A., ii, 101.
Milk, cows', variations in the non-fatty solids of, resulting from interrupted milking (LAUTERWALD), A., ii, 773.
condensed, analysis of, the inversion of cane sugar in the (WATTS and TEMPANY), A., ii, 425.
curdled, analysis of (v. WISSELL), A., ii, 774.
is hydrogen peroxide suitable for sterilising? (GORDAN), A., ii, 108.
sterilisation of, with hydrogen peroxide, with special reference to Budde's process (LUKIN), A., ii, 647, 758.
sterilised, formation of tyrothrixin in, by *Bacillus nobilis* (ADAMETZ and CHSZASZEZ), A., ii, 273.
comparative experiments on preservatives in (SHERMAN, HAHN, and METTLER), A., ii, 758.
of goats, amount of fat in (UJHELYI), A., ii, 772.
chemical analysis and cryoscopy of (LAJOUX), A., ii, 559.
new method of analysis of (BELLIER), A., ii, 618.
rapid method for the analysis of (BORDAS and TOUPLAIN), A., ii, 490.
analysis of samples of, referred to the Government Laboratory in connection with the Sale of Food and Drugs Acts (THORPE), T., 206; P., 63.
detection of boric acid in (CASTELLANA), A., ii, 420.
detection of formaldehyde in (BONNET; NICOLAS), A., ii, 488; (UTZ), A., ii, 560.
detection of hydrogen peroxide in (UTZ), A., ii, 415.
estimation of ammonia in (BERG and SHERMAN), A., ii, 351.
estimation of fat in (COCHRAN), A., ii, 618.
estimation of fat in, by the Röse-Gottlieb method (BURR), A., ii, 559.
improved apparatus for use in the Röse-Gottlieb method of estimating fat in (RÖHRIG), A., ii, 490.
estimation of fat in, by the "sinacid" butyrometer (DU ROI and KÖHLER), A., ii, 125; (MOLKEREITECHN. INST. SICHLER & RICHTER), A., ii, 361; (SCHNEIDER), A., ii, 560.
estimation of fat in, deficient in fat (THOMSEN), A., ii, 773.
estimation of fat, lactose, and proteids in (LOHNSTEIN), A., ii, 773.

Milk, cows' and human, estimation of lactose in, corrections to be applied in the (PATEIN), A., ii, 122.
Milk serum, occurrence in, of substances which react with naphthalene-β-sulphonic chloride (STRITTER), A., ii, 869.
Milk sugar. See Lactose.
Mimusops globosa (or *M. Balata*), balata from (TSCHIRCH and SCHERESCHEWSKI), A., i, 713.
Mineralogical notes (SCHALLER), A., ii, 725.
Mineral oils. See Oils, mineral, Naphtha, and Petroleum.
Minerals from Arizona (LINDGREN and HILLEBRAND), A., ii, 96.
containing rare earths, from Llano Co., Texas (HIDDEN), A., ii, 535.
influence of the gases obtained by heating, on the phosphorescence of zinc sulphide (BASKERVILLE and LOCKHART), A., ii, 624.
gases dissolved in (HÜTTNER), A., ii, 172.
action of radium emanations on (BASKERVILLE and LOCKHART), A., ii, 622.
radioactive (STRUTT), A., ii, 787.
test for vanadic acid in (HUNDESHAGEN), A., ii, 640.
estimation of titanic acid in (TRUCHOT), A., ii, 614.
Mineral waters. See under Water.
Miscibility and isomorphism in the solid state (JAEGER), A., ii, 513.
Mixtures, heats of formation of, and of non-aqueous solutions (TIMOFÉEFF), A., ii, 678.
Molasses, amino-acids in (BERTI), A., ii, 759.
manurial value of, as compared with ammonium sulphate and 40 per cent. potassium salts (LILIENTHAL), A., ii, 650.
refined, containing reducing sugars, analysis of (PELLET), A., ii, 290.
Molecular attraction (MILLS), A., ii, 152, 443.
complex, relation between the size of the, and the temperature coefficient of expansion in different states of aggregation (VAUBEL), A., ii, 74.
reactions, use of finely divided metals in (SABATIER and SENDERENS), A., i, 333.
weights. See Weights, molecular.
Molecules and atoms, heats of combustion of (HENDERSON), A., ii, 145.
determination of the size of, from the kinetic theory of gases (JEANS), A., ii, 14.
Mollusca, physiology of (MENDEL and BRADLEY), A., ii, 179, 737.
Molybdates. See under Molybdenum.
Molybdenum, electromotive behaviour of, and its analogies with that of chromium (MARINO), A., ii, 796.
Molybdenum fluoride (RUFF and EISNER), A., ii, 255.
haloids (ROSENHEIM and BRAUN), A., ii, 717.
*tri*oxide, combined oxidimetric method for the estimation of, in presence of vanadium pentoxide (GLASMANN), A., ii, 208.
Molybdous acid, brominated, and their salts (WEINLAND and KNÖLL), A., ii, 323.
Molybdic acid, reduction of, in sulphuric acid solution, by magnesium (GLASMANN), A., ii, 168.
Molybdates (JUNIUS), A., ii, 825.
brominated and chlorinated (WEINLAND and KNÖLL), A., ii, 323.
Molybdenum organic compound (MESZLÉNYI), A., i, 371.
potassium cyanide and thiocyanate (CHILESOTTI), A., i, 177.
thiocyanates, complex (SAND and BURGER), A., i, 923.
Molybdenum, test for (TRUCHOT), A., ii, 614.
estimation of, electrolytically (CHILESOTTI and ROZZI), A., ii, 484.
estimation of, in steel (AUCHY), A., ii, 861.
separation of, from arsenic and vanadium (FRIEDHEIM, DECKER, and DIEM), A., ii, 764.
Molybdic and **Molybdous acids.** See under Molybdenum.
Monazite, "thorium activity" of (GIESEL), A., ii, 498.
Monazite earths (FEIT and PRZIBYLLA), A., ii, 250; (FEIT), A., ii, 251.
Monetites, isomorphous, artificial production of (DE SCHULTEN), A., ii, 174.
Morencite from Arizona (LINDGREN and HILLEBRAND), A., ii, 97.
Morphenol, α- and β-*mono*- and *di*-bromo-, methyl ethers of (VONGERICHTEN), A., i, 542.
Morphenolquinone, bromo- (VONGERICHTEN), A., i, 543.
Morphimethine, nitro-, and its methiodide (VONGERICHTEN and WEILINGER), A., i, 542.
Morphine, constitution of (KNORR and PSCHORR), A., i, 922.
and its derivatives, physiological action of (BABEL), A., ii, 339.
reactions of (REICHARD), A., ii, 68, 127.

Morphine, detection of, in cases of poisoning (BETTINK), A., ii, 546.
*apo***Morphine**, stable quaternary salts of (PSCHORR), A., i, 658.
Morphothebaine, degradation of, to non-nitrogenous phenanthrene derivatives (KNORR and PSCHORR), A., i, 814.
tribenzoyl derivative (KNORR and PSCHORR), A., i, 814.
Moulds, production and utilisation of glycogen by (HEINZE), A., ii, 344.
respiration and fermentation of, in roll cultures (KRASNOSSELSKY), A., ii, 108.
comparative assimilability of ammonium salts, amides, amines, and nitriles by (LUTZ), A., ii, 548.
See also Fungi and Yeast.
Mountain ash berries, new sugar from (BERTRAND), A., i, 21.
Mud, tidal, bacteriological examination of (SAVAGE), A., ii, 341.
Muntz metal, mass analysis of, by electrolysis, and electrolytic properties of (RHODIN), A., ii, 483.
Murexide, preparation of, from alloxantin and alloxan (HARTLEY), T., 1791 ; P., 166.
absorption spectra of, in relation to colour and chemical structure (HARTLEY), T., 1796 ; P., 166.
Muscarine, choline, and neurine, derivatives of, change of constitution of, in relation to their physiological action (SCHMIDT), A., i, 23 ; ii, 105.
Muscle, the masking of ionic effects on, by organic substances (STILES and BEERS), A., ii, 736.
influence of alcohol, sugar, and tea on the contractility of (HELLSTEN), A., ii, 335.
action of potassium and sodium salts on the indirect excitability of (LOCKE), A., ii, 270.
action of salts on (OVERTON), A., ii, 46.
carnitine from (v. GULEWITSCH and KRIMBERG), A., i, 726.
mytolin from (HEUBNER), A., ii, 841.
heart and skeletal, action of salts on (GUENTHER), A., ii, 545.
skeletal, supposed equivalence of sodium and lithium ions in (MILLIKEN and GOLDTHWAIT), A., ii, 737.
twitchings of, produced by salt solutions (GARREY), A., ii, 334.
frog's, influence of salts on the resting current of (HÖBER), A., ii, 270.
invertebrate, chemistry of (GRIFFITHS), A., ii, 335.
of Octopods (HENZE), A., ii, 270.
Muscovite, an alteration product of topaz (KREJČÍ), A., ii, 177.
Muscular work, production of carbon dioxide in (KORAEN), A., ii, 329.
Mustard seed (HARTWICH and VIULLEMIN), A., ii, 492.
Mycoderma yeast, new varieties of (TAKAHASHI), A., ii, 473.
Myristic acid, α-bromo- (LE SUEUR), T., 1902.
α-hydroxy-, action of heat on, and its amide and lactide (LE SUEUR), T., 1888; P., 285.
Myristic aldehyde and its polymeride, oxime, and semicarbazone (LE SUEUR), T., 1900.
Myristicin and its derivatives (RIMINI), A., i, 199, 656.
Myristicin and *iso***Myristicin**, constitution of (RIMINI), A., i, 198.
*iso***Myristicin** and its derivatives (RIMINI), A., i, 656.
additive compound of, with picryl chloride (BRUNI and TORNANI), A., i, 270.
*di*hydroxy-, and *diiso*nitroso- and its peroxide, and picrate (RIMINI), A., i, 199.
Myristyl cyanide, α-hydroxy-, and its hydrolysis (LE SUEUR), T., 1901.
Myrosin, detection of, in mustard seeds (HARTWICH and VIULLEMIN), A., ii, 492.
Myrtenol and its phthalate from myrtle oil (v. SODEN and ELZE), A., i, 800.
Mytolin from muscle (HEUBNER), A., ii, 841.

N.

Naëgite from Japan (WADA), A., ii, 177.
Naphtha, origin of (CHARITSCHKOFF), A., ii, 43.
synthesis of, and its origin (RAKUSIN), A., ii, 328.
and its distillation products, optical examination of (RAKUSIN), A., ii, 358.
Pennsylvanian, behaviour of, and its products, towards polarised light (RAKUSIN), A., ii, 398.
1′:2′-Naphtha-2:3-anthraquinoneazine (SCHOLL and KAČER), A., i, 89.
Naphthacenequinone, derivatives of (ORCHARDSON and WEIZMANN), P., 307.
Naphthacoumarin, acetyl and benzoyl derivatives, and **carboxylic acid** and its ethyl ester (KNOEVENAGEL and SCHRÖDER), A., i, 63.

1:2-Naphthacoumarincarboxylic acid (BETTI and MUNDICI), A., i, 213.
Naphthacoumarincyanoacetic acid, cyano-, ethyl ester (KNOEVENAGEL and SCHRÖDER), A., i, 64.
Naphthacoumarinketoacetic acid, ethyl ester (KNOEVENAGEL and LANGENSIEPEN), A., i, 64.
Naphthalaldehydic acid, condensation of, with *m*-tolyl methyl ketone, pinacolin, and acenaphthenone (WIECHOWSKI), A., i, 707.
Naphthaldehyde, β-hydroxy-, reactions of (BETTI and MUNDICI), A., i, 213.
Naphthalene, heat action of (HESEHUS), A., ii, 297.
oxidation of, to phthalic acid (DITZ), A., i, 516.
derivatives, an intramolecular change leading to the formation of (ATKINSON and THORPE), P., 305.
Naphthalene, amino-. See Naphthylamines.
1:3-*di*amino-. See 1:3-Naphthylenediamine.
2-bromo-1-nitro- and 2-chloro-1-nitro- (VESELÝ), A., i, 236.
hydroxy-. See Naphthols.
1:4-*di*hydroxy-. See α-Naphthaquinol.
2:7-*di*hydroxy-, and its methyl ethers (BÜNZLY and DECKER), A., i, 885.
β-iodoxy- (MASCARELLI), A., i, 870.
nitro-derivatives, conversion of, into nitroso-derivatives of naphthol (GRAEBE), A., i, 54.
Naphthaleneazodiethylanilines, α- and β-, and their additive salts (GNEHM and BAUER), A., i, 831.
β-Naphthaleneazoeugenol and its acetyl derivative (ODDO and PUXEDDU), A., i, 492.
Naphthalenecarboxylic acids. See Naphthoic acids.
Naphthalene-2-carboxylic acid, 1:3-*di*amino-, and its ethyl ester (ATKINSON and THORPE), P., 305.
Naphthalene-1:8-dicarboxylic acid. See Naphthalic acid.
Naphthalene-2:7-disulphon*tetra*-chloroamide (CHATTAWAY), T., 157; P., 7.
Naphthalene-3:6-disulphonic acid, 1:8-*di*hydroxy-. See Chromotropic acid.
Naphthalenesulphonacetic acids, α- and β-, amides, nitriles, and thioamides of, and the bromo- and chloro-derivatives of the β-amide (TRÖGER and HILLE), A., i, 336.
Naphthalene-1- and **-2-sulphonalkylamides** (CHATTAWAY), T., 161; P., 7.
Naphthalenesulphondialkylacetonitriles, α- and β- (TRÖGER and VASTERLING), A., i, 871.
β-Naphthalenesulphondimethylacetic acid (TRÖGER and VASTERLING) A., i, 871.
Naphthalenesulphonethenylaminoximes, α- and β- (TRÖGER and VOLKMER), A., i, 356.
Naphthalene-1- and **-2-sulphonhalogen-** and **-alkylhalogenamides** (CHATTAWAY), T., 156; P., 7.
Naphthalene-α- and **-β-sulphonyl-*p*-nitroanilines** (MORGAN and MICKLETHWAIT), T., 924; P., 179.
Naphthalene-α- and **-β-sulphonyl-*p*-phenylenediamines**, diazotisation of (MORGAN and MICKLETHWAIT), T., 924; P., 179.
Naphthalic acid, imide of (WERNER and PIGUET), A., i, 68.
Naphthalidopinacolin and its oxime (WIECHOWSKI), A., i, 708.
Naphthamethylcoumarin, azo-derivatives from (HEWITT and MITCHELL), P., 302.
Naphthanthraquinonesulphonic acid, *di-* and *tetra*-chloro- (GRAEBE and PETER), A., i, 704.
Naphthaphenanthridines, α- and β-, and their additive salts, and α- and β-**Naphthaphenanthridones** (GRAEBE), A., i, 82.
αβ-Naphthaphenazine, 8-amino-, and its *N*-acetyl derivative and additive salts, 8-amino-2-hydroxy-, and 8-amino-6-hydroxy- (ULLMANN and ANKERSMIT), A., i, 553.
Naphthaphenazines, formation of (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A.i, 552.
Naphthaphenazoxonium chloride, 4:8-*di*amino- (KEHRMANN), A., i, 949.
Naphthaphenoxazone, action of hydroxylamine hydrochloride on (KEHRMANN and DE GOTTRAU), A., i, 670.
α-Naphthaquinol, 8-amino- (GRAEBE and OSER), A., i, 54.
α-Naphthaquinone, 8-amino-, acetyl derivative of (GRAEBE and OSER), A., i, 54.
2-hydroxy-, preparation of (TEICHNER and WEIL), A., i, 909.
α-Naphthaquinone-4-cyanomethidecarboxylic acid, ethyl ester, and its oxime and compound with *o*-phenylenediamine (SACHS and CRAVERI), A., i, 910.
α-Naphthaquinone-4-dicarbethoxymethide and **-4-dicyanomethide**, 2-hydroxy- (SACHS and CRAVERI), A., i, 910.
β-Naphthaquinone-3:6-disulphonic acid, sodium salt, action of phenylhydrazine sulphate on (TEICHNER), A., i, 952.

α-Naphthaquinone-4-phenylcyanomethide, 2-hydroxy-, and its phenylhydrazone and methyl and ethyl ethers, and *p*-nitro-2-hydroxy-, and its methyl ether (SACHS and CRAVERI), A., i, 909.

β-Naphthaquinonephenylhydrazone (GOLDSCHMIDT and LÖW-BEER), A., i, 390.

β-Naphthaquinone-4-sulphonic acid, condensations with (SACHS and CRAVERI), A., i, 909.

β-Naphthaquinophthalone (EIBNER), A., i, 716.

1:3:6:8-Naphthatetrazine, derivative of (BOGERT and DOX), A., i, 841.

Naphthaxanthone, 2-hydroxy- (ULLMANN and KIPPER), A., i, 597.

***s*-αβ-Naphthazine** and 2-hydroxy- (ULLMANN and ANKERSMIT), A., i, 553.

Naphthidine, constitution of (VESELÝ), A., i, 237.

α-Naphthindole, constitution of, and its **disulphonic acid** (PSCHORR and KUHTZ), A., i, 236.

Naphthionic acid, solubility of, in water (DOLIŃSKI), A., i, 524.

Napthoic acids, reduced optically active (PICKARD and NEVILLE), T., 1763; P., 257.

1-Naphthol, 4:5-*di*amino- and 4:8-*di*nitro- (GRAEBE and OSER), A., i, 54.

5:4- and 8:4-nitronitroso- (GRAEBE and OSER), A., i, 54.

7:4-nitronitroso- (GRAEBE), A., i, 54.

β-Naphthol, excretion of, in the urine after the administration of small doses of naphthalene, benzonaphthol, and β-naphthol (EDLEFSEN), A., ii, 470.

1-Naphthol-3:7-disulphonic acid, 6-amino-, disazo-dyes from (OEHLER), A., i, 845.

β-Naphtholsulphonate. See Asaprol.

1-Naphthol-3-sulphonic acid, 6-amino-, disazo-dyes from (OEHLER), A., i, 162.

β-Naphtholsulphonic acids, α-amino-, azo-compounds from (CHEMISCHE FABRIKEN VORM. WEILER-TER-MEER), A., i, 161.

Naphthoxy-. See Naphthyloxy-.

β-Naphthoylacetic acid, ethyl ester, and its hydrazone (WEIZMANN and FALKNER), P., 307.

β-Naphthoylacetoacetic acid, ethyl ester (WEIZMANN and FALKNER), P., 307.

Naphthoylbenzoic acid, derivatives of (ORCHARDSON and WEIZMANN), P., 307.

isomeric methyl esters (GOLDSCHMIEDT and LIPSCHITZ), A., i, 133.

***o*-Naphthoylbenzoic acid**, β-hydroxy- (BÜNZLY and DECKER), A., i, 884.

2-α-Naphthoylbenzoic acid and its esters, anhydride, and acid amide (GRAEBE) A., i, 704.

3:6-*di*- and 3:4:5:6-*tetra*-chloro-, and their methyl esters (GRAEBE and PETER), A., i, 704.

α-Naphthoyltetrahydroquinoline (v. BRAUN), A., i, 236.

α-Naphthyl benzyl and **methyl sulphides** (TABOURY), A., i, 57.

1-Naphthyl ethyl ether, 4:8-*di*nitro- (GRAEBE and OSER), A., i, 54.

2-Naphthyl methyl ether, 1:6-*di*nitro- (GRAEBE), A., i, 54.

1-Naphthyl 2:2′-oxide and its picrates (ECKSTEIN), A., i, 885.

α-Naphthylamine, freezing points of mixtures of, with the dihydric phenols (PHILIP and SMITH), T., 1735; P., 255.

o-hydroxyazo-derivatives of (BADISCHE ANILIN- & SODA-FABRIK), A., i, 250.

β-Naphthylamine, arylated, preparation of (BUCHERER and STOHMANN), A., i, 585.

Naphthylamines, α- and β-, diazoamino-compounds from (VIGNON and SIMONET), A., i, 397.

1-Naphthylamine-2-sulphonic acid, solubility of, in water (DOLIŃSKI), A., i, 524.

β-Naphthylaminobenzylacetophenone (MAYER), A., i, 215.

α-Naphthylaminodinaphthaxanthen (ROBYN), A., i, 608.

6-β-Naphthylamino-3-methoxybenzoic acid (ULLMANN and KIPPER), A., i, 597.

5-α-Naphthylamino-1-β-naphthyl-3-methylpyrazole (MICHAELIS and DANZFUSS), A., i, 481.

1-β-Naphthylanilopyrine. See 2:5-Phenylimino-1-β-naphthyl-2:3-dimethylpyrazole.

Naphthylazoformaldoximes, α- and β- (BUSCH and WOLBRING), A., i, 494.

β-Naphthyl-*di*- and -*tri*-bromomethylsulphones (TRÖGER and HILLE), A., i, 337.

β-Naphthylcamphoformeneamine and its **carboxylic acid**, β-naphthylamine salt (TINGLE and HOFFMANN), A., i, 799.

α-Naphthylcamphoformeneaminecarboxylic acid, α-naphthylamine salt (TINGLE and HOFFMANN), A., i, 799.

-Naphthylcarb amic hydrazide and its hydrochloride and acetophenone and *o*-hydroxybenzylidene compounds (BORSCHE), A., i, 306.

α-Naphthylcarbimide, reactions of, with amino-acids (NEUBERG and MANASSE), A., i, 647.
1:3-Naphthylenediamine and its diacetyl derivative (ATKINSON and THORPE), P., 306.
1:3-Naphthylenediaminecarboxylic acid. See Naphthalene-2-carboxylic acid, 1:3-*di*amino-.
2:3-Naphthylenedihydrazine and its benzylidene derivative and hydrochloride (FRANZEN), A., i, 244.
α-Naphthylethyl alcohol and its phenylurethane (GRIGNARD), A., i, 594.
Naphthylhydrazines, α- and β-, two new methods of preparing (FRANZEN), A., i, 244.
α-Naphthylideneacetylacetone, β-hydroxy- (KNOEVENAGEL and SCHRÖDER), A., i, 64.
Naphthylidene-*p*-nitroaniline, β-hydroxy-(BETTI and MUNDICI), A., i, 213.
2:5-β-Naphthylimino-1-β-naphthyl-2:3-dimethylpyrazole (1-*β-naphthyl*-2:5-*naphthyliminopyrine*) and its derivatives (MICHAELIS and DANZFUSS), A., i, 481.
2:5-Naphthylimino-1-phenyl-2:3-dimethylpyrazoles, α- and β- (2:5-*naphthyliminopyrines*), and their additive salts (MICHAELIS and HEPNER), A., i, 480.
2:5-Naphthyliminopyrines. See 2:5-Naphthylimino-1-phenyl-2:3-dimethylpyrazoles.
α-Naphthylmethyl chloride (WISLICENUS and WREN), A., i, 284.
β-Naphthylmethylpyrazole, chloro-, methochloride of (MICHAELIS and DANZFUSS), A., i, 481.
1-Naphthyl-2-methylpyrrolidone-2-carboxylic acids, α- and β-, and their esters, amides, aminoximes, and nitriles (KÜHLING and FALK), A., i, 372.
Naphthylnaphthalimides, α- and β- (BARGELLINI), A., i, 211.
α-Naphthyl-nitroacetamide and *-iso*-**nitroacetonitrile** and its sodium derivative (WISLICENUS and WREN), A., i, 284.
Naphthylnitromethanes, α- and β- (WISLICENUS and WREN), A., i, 284.
β-Naphthyloxybenzoic acid (ULLMANN and ZLOKASOFF), A., i, 598; (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 780.
2-β-Naphthyloxy-5-methoxybenzoic acid (ULLMANN and KIPPER), A., i, 596.
Naphthylsulphon-. See Naphthalenesulphon-.
β-Naphthylthiosalicylic acid, new preparation of (GOLDBERG), A., i, 59.
Narcosis, osmosis, and solubility, theories on (TRAUBE), A., ii, 13.
Nataloe-emodin and its triacetyl derivative (LÉGER), A., i, 532.
Natural water. See under Water.
Neatsfoot oil, optical properties of (LYTHGOE), A., ii, 619.
Neodymium salts, thermochemistry of (MATIGNON), A., ii, 505.
Neodymium bromide, chloride, oxychloride, and iodide (MATIGNON), A., ii, 525.
oxide (WAEGNER), A., ii, 35.
Neon, new method of preparing (VALENTINER and SCHMIDT), A., ii, 704.
determination of the amount of, in atmospheric air (RAMSAY), A., ii, 817.
Nephritis (ERBEN), A., ii, 742.
Nerve, action of salts on (OVERTON), A., ii, 46.
basophil granules in (MACDONALD), A., ii, 405.
Nerve fibres, selective action of cocaine on (DIXON), A., ii, 106.
Neurine, choline, and muscarine, derivatives of, change of constitution of, in relation to their physiological action (SCHMIDT), A., i, 23; ii, 105.
Neutralisation point, determination of the, by conductivity measurement (KÜSTER, GRÜTERS, and GEIBEL), A., ii, 55.
Nickel, Villari's critical point in the case (HONDA and SHIMIZU), A., ii, 76.
electrolytic precipitation of, on nickel (SNOWDON), A., ii, 459.
physical properties of pure (COPAUX), A., ii, 254.
passivity of (LEVI), A., ii, 591.
Nickel alloys with cobalt (GUERTLER and TAMMANN), A., ii, 92.
with iron (GUERTLER and TAMMANN), A., ii, 528.
natural. See Awaruite and Souesite.
with gold (LEVIN), A., ii, 532.
Nickel oxide, solid solution of, in ferric oxide (KORTE), T., 1514; P., 229.
higher oxide of (BELLUCCI and CLAVARI), A., ii, 823.
Nickelic salts (TUBANDT), A., ii, 459.
Nickelous fluoride and its compound with ammonia (BÖHM), A., ii, 249.
Nickel organic salts, constitution of, as they exist in aqueous solution (TOWER), A., i, 410.

Nickel, analysis of, electrolytically (PERKIN and PREBBLE), A., ii, 207.
new delicate reagent for (TSCHUGAEFF), A., ii, 613.
detection of, in presence of cobalt (BENEDICT), A., ii, 861.
and cobalt, separation of iron from, by means of formic acid (BORGSTRÖM), A., ii, 538.
Nickel vessels, use of, in laboratories (L'HÔTE), A., ii, 608.
Nickel wire, magnetisation and resistance of, at high temperatures (KNOTT), A., ii, 228.
Nicotine, specific rotatory power of, dissolved in mixtures of water and ethyl alcohol (GNESOTTO and CRESTANI), A., ii, 130.
antidote to (ZALACKAS), A., ii, 339.
1-methylpyrrolidine from (PICTET), A., i, 543.
camphorate (GAWALOWSKI), A., i, 371.
molybdenum compound (MESZLÉNYI), A., i, 371.
and cicutine, reactions for distinguishing between (TORRESE), A., ii, 778.
reactions of (REICHARD), A., ii, 563.
Nicotinic acid, additive salts of (TURNAU), A., i, 547.
*iso***Nicotinic acid**, methiodide and ethylbetaine of (TURNAU), A., i, 547.
Nigrine (?) from Bohemia (KOVÁŘ), A., ii, 173.
Niobium. See Columbium.
Nitrates and **Nitric acid** and **oxide**. See under Nitrogen.
Nitration reaction, kinetics of the (MARTINSEN), A., ii, 149.
Nitrification, studies on (FRAPS), A., ii, 110.
of ammonia fixed by chabazite (WITHERS and FRAPS), A., ii, 111.
of different fertilisers (WITHERS and FRAPS), A., ii, 110.
of sodium nitrite by the nitric ferment, action of ammonium salts on the (BOULLANGER and MASSOL), A., ii, 547.
in arable soil (LÖHNIS), A., ii, 109.
See also Bacteria, nitrogen, and Soils.
Nitrifying power of typical North Carolina soils (WITHERS and FRAPS), A., ii, 111.
Nitriles, preparation of (BADISCHE ANILIN- & SODA-FABRIK; BUCHERER), A., i, 438.
heats of combustion and formation of (THOMSEN), A., ii, 574.
Nitriles, action of hydrogen chloride on mixtures of, with aldehydes or ketones (HENLE and SCHUPP), A., i, 413.
hydrogenation of, by catalysis (SABATIER and SENDERENS), A., i, 267; (FRÉBAULT), A., i, 437; (MAILHE), A., i, 501.
dimolecular (v. MEYER), A., i, 155.
normal fatty, and their alcohols, boiling points of (HENRY), A., i, 561.
of amino- and hydroxy-carboxylic acids (BUCHERER), A., i, 59; (KNOEVENAGEL), A., i, 179.
Nitroamines (ZINCKE), A., i, 486.
Nitro-compounds, heats of combustion and formation of (THOMSEN), A., ii, 574.
dissociation of, in certain solvents (BRUNI and SALA), A., ii, 146.
reduction of, by alcohols in presence of alkali (ROTARSKI), A., i, 765.
mechanism of the hydrogen sulphide reduction of (COHEN and MCCANDLISH), T., 1257; P., 222.
reduction of, with sodium hyposulphite (ALOY and RABAUT), A., i, 517.
resemblance of salts of, to iron salts of organic acids (KONOWALOFF), A., i, 8.
aromatic, electrochemical reduction of (BRAND), A., i, 770.
organic, preparation of (MATUSCHEK), A., i, 256.
Nitro-esters, synthesis of (ULPIANI), A., i, 9.
Nitroform, mercury (LEY), A., i, 316.
Nitrogen, the chemistry of (ARMSTRONG and ROBERTSON), T., 1272; P., 180.
atomic weight of (GRAY), T., 1601; P., 156; (SCOTT), P., 309; (RAYLEIGH), A., ii, 232; (LEDUC), A., ii, 310; (GUYE), A., ii, 442; (GUYE and PINTZA), A., ii, 506; (HINRICHS), A., ii, 517; (GUYE and BOGDAN), A., ii, 702.
deduced from its density (GUYE), A., ii, 442.
deduced from the ratio of the densities of nitrogen and oxygen (GUYE), A., ii, 442.
preparation of pure, from nitrous and nitric oxides and ammonia (BAXTER and HICKEY), A., ii, 314.
preparation of solid (lecture experiment) (ERDMANN), A., ii, 81.
specific heat of, at high temperatures (HOLBORN and AUSTIN), A., ii, 228.
latent heat of vaporisation of (DEWAR), A., ii, 801.

Nitrogen, stereochemistry of (JONES), A., ii, 1.
asymmetric (WEDEKIND), A., i, 520.
influence of, on iron and steel (BRAUNE), A., ii, 638; (LE CHATELIER), A., ii, 639.
action of, on water vapour at high temperatures (TOWER), A., ii, 814.
in gums (STEVENS), A., i, 574.
in soils. See Soils.
assimilation of free, by Bacteria (FRAPS), A., ii, 110.
fixation of atmospheric, by dead leaves (HENRY), A., ii, 111.
nutrition of green plants with (TREBOUX), A., ii, 276.
Nitrogen compounds, quinquevalent, formation and configuration of (JONES), T., 1721; P., 237.
optically active (THOMAS and JONES), A., i, 263.
analysis of, containing nitrogen in union with nitrogen, by means of Kjeldahl's method (FLAMAND and PRAGER), A., ii, 201.
Nitrogen iodide, constitution of (SILBERRAD), T., 55.
metallic derivatives of, and their bearing on its constitution (SILBERRAD), T., 66.
oxides, new method of preparing (ROSSI), A., ii, 386.
preparation of, electrically, from air (STAVENHAGEN), A., ii, 517; (v. LEPEL), A., ii, 581; (SCHEUER), A., ii, 702.
action of fluorine on (MOISSAN and LEBEAU), A., ii, 517.
*mon*oxide (*nitrous oxide*), velocity of decomposition of (HUNTER), A., ii, 805.
density of (GUYE and PINTZA), A., ii, 506.
gravimetric analysis of (GUYE and BOGDAN), A., ii, 702.
*di*oxide (*nitric oxide*), formation of, at high temperatures (NERNST), A., ii, 24.
method for the preparation of a mixture of nitric peroxide and (MATUSCHEK), A., ii, 84.
conductivity of, for heat (FELICIANI), A., ii, 144.
*per*oxide or *tet*roxide (*nitric* per*oxide*), method for the preparation of a mixture of nitric oxide and (MATUSCHEK), A., ii, 84.
Nitric acid, new method of preparing, from compressed air by electric means (ROSSI), A., ii, 386.
Nitrogen:—
Nitric acid, formation of, from nitric oxide and oxygen or atmospheric air (LUNGE and BERL), A., ii, 84.
attempts to prepare absolute (KÜSTER and MÜNCH), A., ii, 243.
and its hydrates, constitution of (HARTLEY), A., ii, 815.
methods employed in preparing the tables of specific gravity of (FERGUSON), A., ii, 632.
properties of mixtures of sulphuric acid and (SAPOSHNIKOFF), A., ii, 583.
theory of the action of metals on (DIVERS), A., ii, 84.
nitrating action of, on saturated hydrocarbons (KONOWALOFF), A., i, 762; (GUREWITSCH; KONOWALOFF and JATZEWITSCH), A., i, 763; (KONOWALOFF and DOBROWOLSKY), A., i, 764.
assay of high-grade (WINTELER), A., ii, 553; (LUNGE), A., ii, 651.
detection of, by the diphenylamine reaction (FRERICHS), A., ii, 282; (HINRICHS), A., ii, 763.
diphenylamine as a reagent for, and its use when mixed with resorcinol and β-naphthol (ALVAREZ), A., ii, 352.
and nitrous acid, detection of, when occurring together and their approximate estimation (RAIKOW), A., ii, 283.
estimation of, electrolytically, with a rotating anode (INGHAM), A., ii, 61.
estimation of, gravimetrically (BUSCH), A., ii, 282; (GUTBIER), A., ii, 418.
estimation of, in presence of organic matter (PFYL), A., ii, 762.
estimation of, in waters (UTZ), A., ii, 283; (BUSCH), A., ii, 418.
Nitrates, influence of carbohydrates and organic acids on the decomposition of, by Bacteria (STOKLASA and VÍTEK), A., ii, 342, 472.
electrolytic reduction of, to nitrites (MÜLLER and SPITZER), A., ii, 314.
Nitrous acid, titration of, with quadrivalent cerium (BARBIERI), A., ii, 553.
and nitric acid, detection of, when occurring together and their approximate estimation (RAIKOW), A., ii, 283.

Nitrogen:—
Nitrous acid, diphenylamine as a reagent for, and its use when mixed with resorcinol and β-naphthol (ALVAREZ), A., 352.
estimation of, in water (WESTON), A., ii, 352.
Nitrites, formation of, by the electrolytic oxidation of ammonia (MÜLLER and SPITZER; TRAUBE and SCHÖNEWALD), A., ii, 242.
electrolytic preparation of, from nitrates, especially at silver cathodes (MÜLLER and SPITZER), A., ii, 703.
constitution of (RÂY and GAÑGULI), P., 278.
heats of combustion and formation of (THOMSEN), A., ii, 574.
Nitrogen sulphide, action of, on acetic acid and its halogen derivatives, acetic anhydride, and propionic acid (FRANCIS), T., 1836; P., 258.
action of, on aromatic aldehydes (DAVIS), T., 1831; P., 258.
action of hydrogen fluoride on (RUFF and THIEL), A., ii, 160.
Nitrogen, detection of, in organic substances (CASTELLANA), A., ii, 201.
estimation of, apparatus for the (NICOLAS and DELAUD), A., ii, 60.
estimation of, by Kjeldahl's process, influence of various kinds of glass on the accuracy of (SCHÖNEWALD and BARTLETT), A., ii, 201.
estimation of, in amino-acids (STANĚK), A., ii, 856.
apparatus for estimating, in ammonium salts and urea (KREIDER), A., ii, 280.
estimation of, in barley (GLIMM), A., ii, 201; (NEUMANN), A., ii, 202.
carbon, and hydrogen, estimation of, in cyanides (MULLER), A., ii, 767.
rapid estimation of, in steel or iron (BRAUNE), A., ii, 60.
estimation of, in lysine and analogous substances by Kjeldahl's method (SÖRENSEN and ANDERSEN), A., ii, 553.
estimation of, in compounds containing nitrogen in union with nitrogen by means of Kjeldahl's method (FLAMAND and PRAGER), A., ii, 201.
estimation of, in organic compounds (SHERMAN and FALK), A., ii, 116.
estimation of organic, in potable waters (BROWN), T., 1051; P., 208.
Nitrogen, proteid, and ammonia, estimation of, in waters (EFFRONT), A., ii, 68.
apparatus for separating, quickly and completely, from a mixture of gases containing it (HENRICH), A., ii, 24.
Nitrogen atom, asymmetric, further analogy between the asymmetric carbon atom and (JONES), T., 135; P., 10.
Nitrogen sulphonic acids, constitution of some (HANTZSCH), A., ii, 313; (DIVERS), A., ii, 449.
Nitroimines and **Nitroiminic acids** (SCHOLL), A., i, 181.
Nitron. See 1-4-Diphenyl-3:5-*endo*-anilodihydrotriazole.
ψ-Nitrosites of unsaturated ketones (WIELAND and BLOCH), A., i, 706.
Nitrosulphate, Pelouze's, constitution of (HANTZSCH), A., ii, 313, 699; (DIVERS), A., ii, 449, 517.
Nitrous acid and **oxide**. See under Nitrogen.
Nitroxyl (*dihydroxyammonia*), new reactions of (ANGELI and ANGELICO), A., ii, 385.
chloride, non-existence of (GUTBIER and LOHMANN), A., ii, 243.
fluoride (*nitryl fluoride*), preparation and properties of (MOISSAN and LEBEAU), A., ii, 518.
Nonane-αι-diamine and its platinichloride (SCHEUBLE and LOEBL), A., i, 3.
Nonanedicarboxylic acid. See β-Hexylglutaric acid.
Nonane-αι-diol and its diacetate (SCHEUBLE and LOEBL), A., i, 3.
Non-electrolytes, refractive powers of, in solution (ZOPPELLARI), A., ii 493.
Nonenyl alcohols. See Dimethylethylbutenylcarbinol and Dimethylheptenol.
Noninene. See Ethylallyl*iso*propenylmethane.
***n*-Nonoic acid** (*pelargonic acid*), bromo-, ethyl ester (BLAISE and LUTTRINGER), A., i, 506.
Nonylene glycols. See βζ-Dimethylheptane-βζ-diol and Nonane-αι-diol.
Normenthane and 8-bromo-, **Normenthanol**(8) and its phenylurethane, **$\Delta^{3,8(9)}$-Normenthadiene** and its dibromide, **$\Delta^{8(9)}$-Normenthene**, and **Δ^{3}-Normenthenol**(8), synthesis of (MATSUBARA and PERKIN), T., 661; P., 131.
Norphenyldihydrothebaine and its additive salts (FREUND), A., ii, 919.
Nuclease (SCHITTENHELM), A., i, 108.

Nucleic acid, preparation of (SLADE), A., i, 620.
oxidation of, with calcium permanganate (BURIÁN), A., i, 725; ii, 271.
from the spleen (LEVENE), A., i, 847.
Nucleic acids, preparation and analysis of (LEVENE), A., i, 847.
hydrolysis of (LEVENE), A., i, 105.
oxidation of (KUTSCHER), A., i, 621.
action of various, on the organism (SCHITTENHELM and BENDIX), A., ii, 744.
Nuclein compounds, enzymes which decompose (SCHITTENHELM), A., i, 108; (SCHENCK), A., ii, 266.
Nucleo-histon as a constituent of tumours (BEEBE), A., ii, 408.
Nucleo-proteid, action of, on albino and pigmented animals (MUDGE), A., ii, 539.
Nut oil, detection of foreign oils in (BELLIER), A., ii, 292.
detection of linseed oil in (HALPHEN), A., ii, 560.
Nutrition, physiological economy in (CHITTENDEN), A., ii, 179; (FOLIN), A., ii, 269.

O.

Oat plants grown in black moor soil, specific action of phosphoric acid on (CLAUSEN), A., ii, 607.
Oat straw, influence of soil moisture on the amounts of total and proteid nitrogen in (v. SEELHORST and FRESENIUS), A., ii, 194.
Oats, composition and nutritive value of (TANGL, KORBULY, and WEISER), A., ii, 757.
increase in the weights of the organic and mineral substances of, as a function of the age (STEFANOWSKA), A., ii, 194.
Obituary notices:—
Frederick Augustus Abel, T., 564.
Cornelis Adriaan Lobry de Bruyn, T., 570.
Edward Frankland, T., 574.
John Hall Gladstone, T., 591.
Wladimir W. Markownikoff, T., 597.
Lyon Playfair, T., 600.
Alexander William Williamson, T., 605.
Oceanic salt deposits, formation of (VAN'T HOFF and MEYERHOFFER), A., ii, 175; (VAN'T HOFF and LICHTENSTEIN), A., ii, 262; (VAN'T HOFF, VOERMAN, and BLASDALE), A., ii, 319; (VAN'T HOFF), A., ii, 464; (VAN'T HOFF and BLASDALE), A., ii, 641.
Ocimum basilicum. See Basil.
Octadecyl alcohol, ester of. See Pennacerin.
*cyclo***Octadiene** and its polymerides and bromo-derivatives (WILLSTÄTTER and VERAGUTH), A., i, 515.
Octadienedicarboxylic acid. See *ααδδ*-Tetramethylfulgenic acid.
Octaglycol *iso*butyrate, oxidation of (LESCH and MICHEL), A., ii, 403.
Octahydroanthracene, oxidation products of (GODCHOT), A., i, 201.
Octahydronaphthalene and *di*bromo- (LEROUX), A., i, 278.
Octahydrophenanthrene and its bromo-derivatives (BRETEAU), A., i, 338.
Octamethyl*tetra*aminotetraphenyl-*p*-xylene (CLAUSSNER), A., i, 791.
Octamethylenediamine, synthesis of, and its mercurichloride (NEUBERG and NEIMANN), A., i, 686.
Octamethyl glucosidoglucoside (PURDIE and IRVINE), T., 1025; P., 215.
Octamethyl sucrose (PURDIE and IRVINE), T., 1028; P., 215.
Octane, *aθ*-*di*amino- (NEUBERG and NEIMANN), A., i, 686.
hydroxy-. See δ-Octanol.
*di*hydroxy-. See *βε*-Dimethylhexylene *βε*-glycol, *β*-Methylheptan *βζ*-diol, and Octane-*δε*-diols.
Octanedicarboxylic acid. See Suberic acid.
Octane-*δε*-diols, *α*- and *β*- (BOUVEAULT and LOCQUIN), A., i, 573.
δ-Octanol and its pyruvate and its semicarbazone (BOUVEAULT and LOCQUIN), A., i, 573.
δ-Octanone and its semicarbazone (BOUVEAULT and LOCQUIN), A., i, 573.
*cyclo***Octatriene** (WILLSTÄTTER and VERAGUTH), A., i, 515.
*cyclo***Octenes** (WILLSTÄTTER and VERAGUTH), A., i, 515.
Octoic acid. See *α*-Propylvaleric acid.
Octopods, muscle of (HENZE), A., ii, 270.
Octylene glycols. See *βε*-Dimethylhexylene *βε*-glycol and Octane-*δε*-diols.
Odours, limits of sensitiveness of (BERTHELOT), A., ii, 20.
Oils, influence of atmospheric oxidation on the constants of (SHERMAN and FALK), A., ii, 491.
influence of atmospheric moisture on the oxygen absorption of (LIPPERT), A., i, 258.
essential and ethereal. See Oils, vegetable.
mineral, heating of, when shaken with concentrated sulphuric acid (KISSLING), A., ii, 863.
See also Naphtha and Petroleum.

Oils, phosphorised, estimation of phosphorus in (ENELL; RUPP), A., ii, 763.
vegetable (SCHIMMEL & Co.), A., i, 536.
formation and distribution of the, of an annual plant (CHARABOT and LALOUE), A., ii, 112.
optical activity of the more important (RAKUSIN; LYTHGOE), A., ii, 619.
estimation of certain aldehydes and ketones in (SADTLER), A., ii, 867.
oxidising action of impure ether containing peroxide on Kreis's reaction for (DITZ), A., ii, 560.
iodine numbers of (PAJETTA), A., ii, 774.
the vanillin-hydrochloric acid reaction for (ROSENTHALER), A., ii, 489.
use of mineral oil for the determination of the Maumené figure of (SUZZI), A., ii, 619.
detection of palm oil when used as a colouring matter in (CRAMPTON and SIMONS), A., ii, 362.
Oleic acid, reduction of, to stearic acid by electrolysis (PETERSEN), A., i, 678.
separation of, from stearic acid and other solid fatty acids by means of light petroleum and alcohol (CHARITSCHKOFF), A., i, 405.
Oleodipalmitin and **Oleodistearin** from plants (KLIMONT), A., ii, 126, 475.
Oleyl alcohol and its phenylurethane (BOUVEAULT and BLANC), A., i, 12.
Olive oil, iodine numbers of fresh and old samples of (PAJETTA), A., ii, 775.
detection of, which has been extracted by means of carbon disulphide (HALPHEN), A., ii, 619.
detection of cotton seed oil in (MILLIAU), A., ii, 126.
One-component ideal-constituent gases, fundamental functions of (BELL and TREVOR), A., ii, 374.
Ophiuroidea, pigment of (GRIFFITHS), A., i, 293.
Opianic acid, products of the condensation of (BRUNS), A., i, 353.
Opium and its preparations, assay of (LENTON), A., ii, 491.
assay, U.S.P., meconic acid in the, and certain meconates (MALLINCKRODT and DUNLAP), A., ii, 777.
Optical activity. See under Photochemistry.
Orange, sweet, oil from the leaves and stems of the (LITTERER), A., i, 802.
Orange juice, composition of (FARNSTEINER and STÜBER), A., ii, 52.
Orange IV, nitro-derivatives of (JUILLARD), A., i, 843.
Orcinol monomethyl ether, amino-, an oxidation product of (HENRICH and SCHIERENBERG), A., i, 93.
Ore deposition, chemistry of (SULLIVAN), A., ii, 642.
Ores containing barium, estimation of manganese as sulphide in (BLUM), A., ii, 206.
Organic compounds, preparation of, with two consecutive double linkings (MAZZUCCHELLI), A., i, 633.
volatile, heats of combustion and formation of (LAGERLÖF), A., ii, 76, 677; (THOMSEN), A., ii, 231, 435, 571, 801; (BERTHELOT), A., ii, 504.
relation between the heats of combustion and constitutional formulæ of (LEMOULT), A., ii, 441.
mechanism of the action of finely-divided metals on (SABATIER and SENDERENS), A., i, 401.
action of phosphorus on (WICHELHAUS), A., i, 432.
combustible gaseous, in the air (WOLPERT), A., ii, 160.
unsaturated, addition of bromine to (BAUER), A., i, 729.
action of bromine on (PICCININI), A., i, 598.
electrical method for the combustion of (MORSE and TAYLOR), A., ii, 480.
estimation of nitrogen in (SHERMAN and FALK), A., ii, 116.
Organic matters, destruction of, in toxicological investigations (GRIGORÉEFF), A., ii, 354.
Organic substances, ultimate analysis of (HERMANN), A., ii, 767.
detection of nitrogen in (CASTELLANA), A., ii, 201.
estimation of halogens and sulphur in (SADTLER), A., ii, 760.
Organism, action of cobalt-, rhodium-, and chromium-ammonium compounds on the (BOCK), A., ii, 49.
carbohydrate combustion in the (STOKLASA), A., ii, 179.
proteolysis and proteid synthesis in the (HENRIQUES and HANSEN), A., ii, 180; (ABDERHALDEN), A., ii, 334; (ABDERHALDEN and RONA), A., ii, 467.
influence of fever on the reducing action of the (HERTER), A., ii, 103.
anti-substances against crotin in the normal (LUST), A., ii, 48.

Organism, formation of aromatic fatty acids in the (KNOOP), A., ii, 46.
formation of acetone in the (MAIGNON; SATTA), A., ii, 406; (WALDVOGEL), A., ii, 735.
formation of allantoin in the (EPPINGER), A., ii, 336.
creatine and creatinine in the (CZERNECKI), A., ii, 467.
distribution of glucothionic acid in the (MANDEL and LEVENE), A., ii, 736.
indole and scatole in the (GROSSER), A., ii, 470.
d-lactic acid in the (MORIYA), A., ii, 181.
human, occurrence of lithium in the (HERRMANN), A., ii, 735.
formation of protamines in the (KOSSEL), A., ii, 467.
Organs, alcohol in (NICLOUX), A., ii, 181.
non-existence of arsenic in (KUNKEL), A., ii, 542.
amount of calcium and magnesium in (TOYONAGA), A., ii, 335.
estimation of mercury in (SCHUMM), A., ii, 286.
Orotic acid and its salts, esters, and dichloro-derivative (BISCARO and BELLONI), A., i, 672.
Orsat apparatus, improved (BEMENT), A., ii, 855.
Osminitrites (WINTREBERT), A., ii, 261.
Osmium, liquid hydrosol of (GUTBIER and HOFMEIER), A., ii, 533.
new iodine compound of (ALVAREZ), A., ii, 423.
Osmium nitrite (WINTREBERT), A., ii, 261.
Osmosis and **Osmotic pressure**. See under Diffusion.
Osotetrazones, new mode of formation of (DIECKMANN and PLATZ), A., i, 953.
Osteomalacia, metabolism in (GOLDTHWAIT, PAINTER, OSGOOD, and MCCRUDDEN), A., ii, 845.
Ovalbumin, crystallised (COHN), A., i, 103.
Ox bile. See Bile.
Oxadiazines, formation of (DIELS and VAN DER LEEDEN), A., i, 946.
1:3:4-Oxadiazoles, formation of (STOLLÉ and MÜNCH), A., i, 95.
Oxalacetic acid, cyano-, esters (TRIMBACH), A., i, 323.
Oxalate ion, electroaffinity of the (SCHÄFER), A., ii, 499.
Oxalatotetra-aminechromium salts (PFEIFFER and BASCI), A., i, 855.
Oxalic acid, new synthesis of (MOISSAN), A., i, 507; ii, 818.
action of, on lead ferrocyanide (LEUBA), A., i, 422.
kinetics of the reaction between potassium permanganate and (SKRABAL), A., ii, 17.
estimation of, by permanganate in presence of hydrochloric acid (BAXTER and ZANETTI), A., ii, 490.
Oxalic acid, certain alleged double salts (FOOTE and ANDREW), A., i, 679.
acid alkali salts, and their solubility (FOOTE and ANDREW), A., i, 679.
acid ammonium salts (WALDEN), A., i, 679.
ammonium salt, formula and stability of (DUPRÉ), A., i, 679.
ferrous salt, molecular condition of, in solution (SHEPPARD and MEES), T., 189; P., 10.
magnesium salt, occlusion of, by calcium oxalate (KORTE), T., 1508; P., 229.
mercuric salt (*Eder's solution*), photochemical action of, in absence of oxygen and in presence of fluorescent compounds (JODLBAUER and V. TAPPEINER), A., ii, 565.
thallium salts, solubility of (ABEGG and SPENCER), A., i, 853.
Oxalic acid, ethyl ester, action of magnesium phenyl bromide on (ACREE), A., i, 216.
Oxalic acid, chloro-, methyl and ethyl esters, action of, on acetylacetone (TRIMBACH), A., i, 565.
action of, on cyanoacetic esters (TRIMBACH), A., i, 323.
Oxalocrotonic acid, ethyl ester, azo-derivatives of (PRAGER), A., i, 391.
4:4′-Oxalotoluidide, 2:2′-*di*amino-, sulphur dye from (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 540.
Oxaluramide (SCHENCK), A., i, 267.
Oxaluria (KUTSCHER and SCHENCK), A., ii, 104.
Oxalylhydrazine, di- and hexa-acetyl and dibenzoyl derivatives of (STOLLÉ and KIND), A., i, 96.
Oxazine and **thiazine dyes**, ammonium and oxonium formulæ of (HANTZSCH), A., i, 605; (KEHRMANN and DE GOTTRAU), A., i, 670.
Oxazole, $C_{12}H_{11}O_3N$, from acetic anhydride and *o*-methoxyphenylserine (ERLENMEYER and BADE), A., i, 131.
Oxazones (GNEHM and BAUER), A., i, 831.

Oxen, formation and decomposition of uric acid in extracts of the organs of (SCHITTENHELM), A., ii, 644.
Oxidation and reduction (SCHOORL), A., ii, 692.
"primary oxide" theory of (SKRABAL), A., ii, 18.
kinetics of processes of (SKRABAL), A., ii, 804.
mechanism of the process of (ARMSTRONG), A., ii, 448.
influence of alkaloids on certain processes of (FEDER), A., i, 150.
spontaneous, influence of alkaline substances on (SCHÄR), A., i, 434.
Auto-oxidation, theory of (MEYER), A., ii, 697.
Oxidation phenomena (KASSNER), A., ii, 19.
Oxidation and **reduction reactions,** reversible, in solutions (SCHOCH), A., ii, 19.
Oxides, reduction of (VIGOUROUX), A., ii, 822.
Oximes, heat of formation of (LANDRIEU), A., ii, 301.
velocity of formation of, in certain ketones (STEWART), T., 410; P., 84.
reduction of (FRANZEN), A., i, 427.
of the type, R·CO·CR′:N·OH, preparation of (BOUVEAULT and LOCQUIN), A., i, 19.
of α-diketones, preparation of (LOCQUIN), A., i, 19.
of ketone-alcohols of the benzoin type, Beckmann's rearrangement in (WERNER and DETSCHEFF), A., i, 225.
α-Oximino-esters, reduction of (BOUVEAULT and LOCQUIN), A., i, 32, 33.
preparation of α-ketonic acids and esters from (BOUVEAULT and LOCQUIN), A., i, 10; (LOCQUIN), A., i, 11.
Oximino-ethers, use of, in condensations (DIELS and PLAUT), A., i, 509.
α-Oximino-β-phenylhydrazinobutyric acid, ethyl ester (WAHL), A., i, 408.
Oxonium compounds, Grignard-Baeyer, conversion of organo-magnesium compounds into, and the thermochemical investigation of this reaction (TSCHELINZEFF), A., ii, 802.
Oxonium and **ammonium salts** (HANTZSCH), A., i, 605; (KEHRMANN and DE GOTTRAU), A., i, 670; (KEHRMANN), A., i, 930.
6-Oxy-2-alkylpyrimidines (WHEELER and BRISTOL), A., i, 482.
2-Oxy-6-anilinopyrimidine and its hydrochloride (WHEELER and BRISTOL), A., i, 485.
6-Oxy-2-anilinopyrimidine, 5-bromo- (WHEELER, BRISTOL, and JOHNSON), A., i, 483.
Oxycoumarin and its phenylhydrazone and compound with *o*-phenylenediamine (ERLENMEYER and STADLIN), A., i, 239.
Oxydase (JONES and WINTERNITZ), A., ii, 334.
See also Malt oxydase.
Oxydases, observations on (ASŌ), A., ii, 246.
chemical (BAUDRAN), A., ii, 632.
3-Oxy-5:6-dimethoxydiphenyldihydrotriazine and its diacyl derivatives (BILTZ and STELLBAUM), A., i, 675.
3-Oxy-5:6-dimethylenetetra-oxydiphenyldihydrotriazine and its diacyl derivatives (BILTZ and STELLBAUM), A., i, 675.
3-Oxy-5:6-diphenyldihydrotriazine and its diacyl derivatives and methyl ether (BILTZ and STELLBAUM), A., i, 675.
3-Oxy-5:6-diphenyl-triazine and **-2-methyltriazine** (BILTZ and ARND), A., i, 674.
5-Oxy-1:3-diphenyltriazole (WHEELER and STATIROPOULOS), A., i, 721.
3-Oxy-5:6-di*iso*propyldiphenyldihydrotriazine and its diacyl derivatives (BILTZ and STELLBAUM), A., i, 675.
6-Oxy-2-ethylthiol-4-ethylpyrimidine and 5-bromo- (WHEELER, BRISTOL, and JOHNSON), A., i, 483.
4-Oxy-2-ethylthiolpyrimidine, 6-amino- (JOHNSON and JOHNS), A., i, 837.
6-Oxy-2-ethylthiolpyrimidine, 5-amino-, and the action of phosphorus oxychloride on (JOHNSON), A., i, 835.
Oxygen, preparation of (JAUBERT), A., ii, 311.
basic properties of (MCINTOSH), T., 784; P., 64, 120; A., i, 254, 677.
quadrivalent (BLAISE), A., i, 111, 255.
quadrivalency of (HOMFRAY), T., 1443; P., 226.
refractive index of, in the infra-red (KOCH), A., ii, 661.
action of ultra-violet light on moist and dried mixtures of carbon monoxide and (CHADWICK, RAMSBOTTOM, and CHAPMAN), P., 287.
specific heat of, at high temperatures (HOLBORN and AUSTIN), A., ii, 228.
latent heat of vaporisation of (DEWAR), A., ii, 801.

Oxygen, coefficient of expansion of (JAQUEROD and PERROT), A., ii, 507.
equilibrium between copper, tin, and (HEYN and BAUER), A., ii, 169.
absorption of, by platinum (LUCAS), A., ii, 396.
combustion of, in hydrogen phosphide and of hydrogen phosphide in oxygen, and the reversal of the flame; lecture experiment (LANG), A., ii, 810.
action of, on cæsium-ammonium (RENGADE), A., ii, 521.
union of, with hydrogen at low pressures through the passage of electricity (KIRKBY), A., ii, 236.
union of, with hydrogen at low pressures caused by the heating of platinum (KIRKBY), A., ii, 695.
estimation of, in copper (DICKSON), A., ii, 479.
Oxyhæmoglobin, spectroscopy of (PIETTRE and VILA), A., i, 399, 500, 621; ii, 402; (VILLE and DERRIEN), A., i, 399, 500; (VILA and PIETTRE), A., i, 847.
reduction of (LÉPINE and BOULUD), A., ii, 403.
action of fluorides on (PIETTRE and VILA), A., ii, 601.
Oxymercuric *per*chlorates, See under Mercury.
6-Oxy-2:4- and -4:2-methylhexylpyridines, 5-cyano- (ISSOGLIO), A., i, 610.
2-Oxy-4:4:6-tri- and -3:4:4:6-tetramethyltetrahydro-1:3-oxazines (KOHN), A., i, 928.
4-Oxy-2-methylthiolpyrimidine, 6-amino- and 5-bromo-6-amino- (JOHNSON and JOHNS), A., i, 836.
6-Oxy-2-methylthiolpyrimidine hydrochloride (WHEELER, BRISTOL, and JOHNSON), A., i, 483.
6-Oxy-2:4- and -4:2-phenylmethyldihydropyridines, 5-cyano- (ISSOGLIO), A., i, 610.
Oxypyridines, isomeric, from β-ketones (ISSOGLIO), A., i, 609.
See also Pyridone.
2-Oxypyrimidine, 4-chloro-5-bromo-6-amino- (JOHNSON and JOHNS), A., i, 838.
Oxysparteine and its additive salts (WILLSTÄTTER and MARX), A., i, 544.
Ozone, formation of, by ultra-violet light (FISCHER and BRAEHMER), A., ii, 580.
production of, from oxygen and atmospheric air by the discharge from metallic points (WARBURG), A., ii, 516.
Ozone, electrical production of (KAUSCH), A., ii, 698, 811.
apparatus to show the production of, during the combustion of coal gas (MAQUENNE), A., ii, 382.
photographic activity of (SCHAUM), A., ii, 295.
equilibrium between hydrochloric acid and (JAHN), A., ii, 16.
liquid, storing and manipulating a solution of, in liquid air (lecture experiment) (ERDMANN), A., ii, 81.
physiological action of (SIGMUND), A., ii, 472, 476.
influence of, on the lungs (BOHR and MAAR), A., ii, 329.

P.

Palladium (PAAL and AMBERGER), A., ii, 397.
occurrence of, in Brazil (HUSSAK), A., ii, 598.
chemical properties and combining weight of (AMBERG), A., ii, 832.
influence of very strong electromagnetic fields on the spark spectra of (PURVIS), P., 241.
diffusion of hydrogen through (RICHARDSON), A., ii, 233.
comparative absorption of hydrogen by rhodium and (QUENESSEN), A., ii, 172.
influence of temperature and pressure on the absorption and diffusion of hydrogen in (WINKELMANN), A., ii, 397.
See also Palladium-hydrogen.
colloidal, and its hydride (PAAL and AMBERGER), A., ii, 397.
rendering active of hydrogen by (PAAL and AMBERGER), A., ii, 397, 533.
hydrosol (GUTBIER and HOFMEIER), A., ii, 396.
Palladium, halogen derivatives (GUTBIER and KRELL), A., ii, 534.
hydride (PAAL and AMBERGER), A., ii, 397.
oxides (WÖHLER and KÖNIG), A., ii, 722.
Palladous bromide and chloride, compounds of, with aromatic bases (GUTBIER), A., i, 584.
Palladium organic compounds (GUTBIER), A., i, 584; (GUTBIER, KRELL, and JANSSEN), A., i, 876.
thiocyanates (BELLUCCI), A., i, 122.
Palladium-hydrogen as a reducing agent in quantitative analysis (CHAPMAN), A., ii, 58.

Palladous bromide and chloride. See under Palladium.
Palm oil, detection of, when used as a colouring matter in oils and fats (CRAMPTON and SIMONS), A., ii, 362.
Palm oils, estimation of the volatile fatty acids in (JENSEN), A., ii, 772.
Palmatisine from *Aconitum palmatum* (DUNSTAN and HENRY), T., 1651; P., 235.
Palmitic acid from the oil from the seeds of *Gynocardia odorata* (POWER and BARROWCLIFF), T., 899; P., 177.
α-bromo-, preparation of (LE SUEUR), T., 1895.
α-hydroxy-, preparation of, action of heat on, and its amide and lactide (LE SUEUR), T., 1888; P., 285.
α-iodo- (PONZIO), A., i, 405.
Palmitic aldehyde and its polymeride, oxime, and semicarbazone (LE SUEUR), T., 1892.
Palmityl cyanide, *α*-hydroxy-, and its hydrolysis (LE SUEUR), T., 1893.
Pancreas and glycolysis (CLAUS and EMBDEN), A., ii, 179, 404; (COHNHEIM), A., ii, 267.
and spleen (PRYM), A., ii, 404.
the lymph-flow from the (BAINBRIDGE), A., ii, 100.
nuclein bases produced during the autofermentation of the (SCHENCK), A., ii, 266.
secretion of the human (ELLINGER and COHN), A., ii, 643.
Pancreas ferment. See Enzyme, pancreas.
Pancreas-steapsin, time and fermentation laws of (ENGEL), A., ii, 732.
Pancreatic diabetes. See Diabetes.
digestion. See Digestion.
Pancreatic juice rendered active under the combined influence of colloids and electrolytes (DES BANCELS), A., ii, 643.
action of, on edestin from cotton seeds (ABDERHALDEN and REINBOLD), A., ii, 838.
maltase of (BIERRY and TERROINE), A., ii, 643.
Pancreatic secretion (CHAPMAN), A., ii, 838.
Papaver dubium, alkaloid from (PAVESI), A., i, 368.
Papaverine, nitro-, methonitrate of (DECKER, GADOMSKA, and GIRARD), A., i, 469.
Papaverinium bases (DECKER and KOCH), A., i, 472.
Paracasein and casein in some of their relations to bases and acids (VAN SLYKE and HART), A., i, 498.
Parachymosin, estimation of (BECKER), A., ii, 712.
Paraffin, commercial, composition of (MABERY), A., i, 313.
estimation of, in mineral oil distillates by means of a filter funnel (FLEISCHER), A., ii, 486.
Paralactic acid. See *d*-Lactic acid.
Paraldehyde. See under Acetaldehyde.
Pararosaniline, action of sulphurous acid on (DÜRESCHNABEL and WEIL), A., i, 947.
Parathyroid glands. See under Glands.
Paraxanthine, 8-amino-, and its sodium salt and alkyl and aryl derivatives (BOEHRINGER & SÖHNE), A., i, 230.
Pastorase (MALVEZIN), A., ii, 749.
Patchouli oil and the action of sulphuric acid on (DE JONG), A., i, 802.
Peaches, the ripening of (BIGELOW and GORE), A., ii, 756.
Pelargonic acid. See *n*-Nonoic acid.
ψ-Pelletierine, derivatives of (WILLSTÄTTER and VERAGUTH), A., i, 543.
Pennacerin (RÖHMANN), A., ii, 842.
2:3:6:7′:2-Penta-acetoxyphenylxanthen and 3′-bromo- (HEINTSCHEL), A., i, 809.
Pentadecoic acid and its salts, esters, and amide, and *α*-bromo- (LE SUEUR), T., 1898.
α-hydroxy-, action of heat on, and its amide and lactide (LE SUEUR), T., 1899.
Pentadecoic aldehyde and its polymeride, oxime, and semicarbazone (LE SUEUR), T., 1896.
Pentadecyl cyanide, *α*-hydroxy-, and its hydrolysis (LE SUEUR), T., 1896.
Penta-$\Delta^{\alpha\gamma}$-dien-*α*-ol-*ε*-al, *β*-chloro. See Glutaconaldehyde, *α*-chloro-.
Pentamethylenediamine (*cadaverine*), synthesis of, and its phenylcarbamide derivative (NEUBERG and NEIMANN), A., i, 686.
excretion of, in a case of cystinuria (BÖDTKER), A., ii, 741.
picronolate (OTORI), A., i, 126.
Pentamethylenediaminephenylcarbimide (LOEWY and NEUBERG), A., i, 158.
Pentamethylene series, syntheses in the (HAMONET), A., i, 403.
derivatives of the (v. BRAUN and STEINDORFF), A., i, 341.
Pentane, *αε-di*chloro-, formation of (v. BRAUN and MÜLLER), A., i, 634.
*di*hydroxy-. See Dimethyltrimethylene glycol and Pentane-*βδ*-diol.
See also *γ*-Methylbutane and Tetramethylmethane.

Pentanedicarboxylic acids. See Dimethylglutaric acids, Methyladipic acids, and Pimelic acid.
Pentane-βδ-diol and its diacetate (FRANKE and KOHN), A., i, 111.
*cyclo***Pentanediphenyldisulphones** (POSNER and TSCHARNO), A., i, 279.
Pentanetricarboxylic acid. See α-Ethyltricarballylic acid.
*cyclo***Pentanone**, preparation of (HOLLEMANN, VAN DER LAAN, and SLIJPER), A., i, 444.
Pentenedicarboxylic acid. See αβ-Dimethylglutaconic acid.
Pentenoic acid. See β-Methylcrotonic acid.
Pentinene. See Dimethylallene.
Pentosans, estimation of (ELLETT and TOLLENS), A., ii, 210.
Pentoses, Tollens' phloroglucinol and hydrochloric acid reaction for (PINOFF), A., ii, 289.
Peppermint oil from Java (VAN DER WIELEN), A., i, 223.
Pepsin, preparation of (SCHRUMPF), A., i, 556.
action of (COBB), A., ii, 466.
action of, on albumin precipitated by heat in presence of acid (DISDIER), A., i, 251.
Volhard's titrimetric method for the estimation of (LÖHLEIN), A., ii, 780.
Peptone from lupin seeds (MACK), A., ii, 474.
Peptone membranes, solid, on a water surface, and the cause of their formation (METCALF), A., ii, 512.
Peptones (NEUMANN), A., i, 726; (SIEGFRIED), A., i, 727.
haloid acid salts of (KALLE & Co.), A., i, 252.
formation of complex proteids from (SPIEGEL), A., i, 954.
Perborates. See under Boron.
Perchloric acid. See under Chlorine.
Perchromic acid. See under Chromium.
Period of induction. See Induction.
Periodic acid. See under Iodine.
Periodic system, construction of the (WERNER), A., ii, 308, 514; (ABEGG), A., ii, 380, 514.
the eighth group of the (ABEGG), A., ii, 380.
Perlatic acid and its salts and ethyl ester, **Perlatide**, diacetyl derivative, and **Perlatol** (HESSE), A., i, 139.
Permonosulphuric acid. See under Sulphur.
Pernitroso-compounds from oximes, constitution of the group, N_2O_2, of (ANGELUCCI), A., i, 801.
Peroxyprotoic acids (v. FÜRTH) A., i, 497.
Peroxythiocyanic acid and its iron salt (TARUGI), A., i, 177.
Perstannic acids. See under Tin.
Persulphuric acid. See under Sulphur.
Pertantalates. See under Tantalum.
Petroleum, composition of (MABERY), A., i, 313.
light (ADAMS), A., i, 253.
Louisiana, hydrocarbons in (COATES and BEST), A., ii, 833.
from the torbanite of New South Wales (PETRIE), A., i, 849.
Roumanian, isohexanes in (PONI and COSTACHESCU), A., i, 109.
estimation of sulphur in (GOETZL), A., ii, 761.
See also Naphtha and Oils, mineral.
Phase rule. See under Equilibrium.
Phellandrene, natural and synthetical (KONDAKOFF and SCHINDELMEISER), A., i, 801.
α-**Phellandrene** from carvone and its chloro-derivative (HARRIES and JOHNSON), A., i, 535.
β-**Phellandrene** and its nitrite and diamino- and nitro-derivatives, constitution of (WALLACH), A., i, 709.
Phenacyl-alanturic acid and its acetyl derivative, and **-dialuric acid** (KÜHLING), A., i, 944.
Phenacylaniline, condensation of, with certain chloro-ethers (MASELLI), A., i, 776.
Phenacyldialkylsulphine salts (SMILES), P., 93.
9′:10′-Phenanthra-2:3-anthraquinoneazine (SCHOLL and KAČER), A., i, 88.
Phenanthra*di*chlorophenazine (NOELTING and KOPP), A., i, 873.
Phenanthranil and its acetyl derivative and its lactim ester (JAPP and KNOX), T., 682; P., 153.
Phenanthranilic acid, ethyl ester (JAPP and KNOX), T., 682.
ψ-**Phenanthraphenazoxine** (KEHRMANN), A., i, 930.
Phenanthraphenazoxonium perbromide and hydrogen sulphate (KEHRMANN), A., i, 930.
Phenanthraquinone, action of a mixture of glacial acetic acid and hydriodic acid on (LAGODZINSKI), A., i, 601.
action of acetic anhydride and sodium acetate on (SCHARWIN), A., i, 448.
action of *o*-aminophenol on (KEHRMANN), A., i, 930.
condensations of, with ketonic compounds (JAPP and WOOD), T., 712.
condensation of, with phenylacetone (LANG), A., i, 292.

Phenanthraquinone, action of alcoholic potassium hydroxide on (MEYER and SPENGLER), A., i, 219, 362.
Phenanthraquinonedihydrocyanides, isomeric, and their diacetyl derivatives (JAPP and KNOX), T., 681 ; P., 153.
Phenanthrene, hydrogenation of (BRETEAU), A., i, 338.
9:10-*di*bromo- and 9:10-*di*chloro- (SCHMIDT and LADNER), A., i, 43.
9-hydroxy- (JAPP and KNOX), T., 684.
Phenanthrene-9-carboxylic acid, 10-amino-. See Phenanthranilic acid.
Phenanthroxylenephenylacetone and its isomeride, and their phenylhydrazones and dibromides (LANG), A., i, 292.
9-Phenanthryl oxide (JAPP and KNOX), T., 684.
Phenanthryl-9-glyoxylic acid, 10-hydroxy-, lactone of, and its barium salt and phenylhydrazone (MEYER and SPENGLER), A., i, 220, 362 ; (SCHARWIN), A., i, 448.
Phenazine, *di*amino- (WILLSTÄTTER and PFANNENSTIEL), A., i, 723.
Phenetidilacetonedicarboxylic acid, ethyl ester (SCHROETER and SCHWAMBORN), A., i, 820.
2-Phenetidine, 3:5-*di*nitro-, and its *N*-alkyl derivatives (BLANKSMA), A., i, 431.
p-**Phenetidine**, ethylsulphone derivatives of, and their pharmacological importance (AUTENRIETH and BERNHEIM), A., i, 47.
β-**Phenetidinotricarballylic acid** and its ethyl ester and its amide, imide, imide-acid, and nitrile (SCHROETER and SCHWAMBORN), A., i, 820.
Phenetole, *p*-bromo-, action of sulphur on the organo-magnesium compounds of (TABOURY), A., i, 644.
s-*di*nitro-, nitration and reduction of (BLANKSMA), A., i, 431.
p-**Phenetolesulphon-acetonitrile** and **-ethenylaminoxime** (TRÖGER and VOLKMER), A., i, 356.
p-**Phenetolesulphondialkylacetonitriles** (TRÖGER and VASTERLING), A., i, 871.
Phenetyldiguanides, *o*- and *p*-, and their salts (A. and L. LUMIÈRE and PERRIN), A., i, 250.
Phenol, dielectric constants of, dissolved in benzene and *m*-xylene (PHILIP and HAYNES), T., 1001 ; P., 200.
condensation of, with formaldehyde (HENSCHKE), A., i, 429.
action of cresols in comparison with (TOLLENS), A., ii, 339.
introduction of carboxyl groups into, by the action of carbon dioxide (TIJMSTRA), A., i, 439.
Phenol, compound of, with potassium phenoxide (GENTSCH), A., i, 341.
estimation of (LLOYD), A., ii, 209.
Phenol, *p*-amino-, *N*-acetyl derivative, nitration of (MELDOLA and STEPHENS), T., 1203 ; P., 218.
nitro-derivatives of, and their acetyl and benzoyl derivatives (REVERDIN and DRESEL), A., i, 51, 430.
2:4-*di*- and 2:4:6-*tri*-amino-, hyposulphites of (A. and L. LUMIÈRE and SEYEWETZ), A., i, 157.
o-aminothio-, dibenzoyl derivative of (REISSERT), A., i, 927.
m-bromo-, preparation of (DIELS and BUNZL), A., i, 432.
*tri*bromo-, bromide of, rate of formation of, reaction of, with hydriodic acid, and its detection and estimation (LLOYD), A., i, 277.
o-chloro-, preparation of (LOSSEN), A., i, 126.
2:5-*di*chloro- (NOELTING and KOPP), A., i, 872.
3:4-*di*chloro- (BADISCHE ANILIN- & SODA-FABRIK), A., i, 149.
2-chloro-4:6-*di*nitro- (ALOY and FRÉBAULT), A., i, 430.
o-chlorothio- (FRIEDLÄNDER and MAUTHNER), A., i, 102.
2:4:6-*tri*nitro-. See Picric acid.
2:6-*di*nitro-4-amino-. See *iso*Picramic acid.
3:5-*di*nitro-4-amino-, and its acetyl derivatives and diazonium salt (REVERDIN and DRESEL), A., i, 430.
4:6-*di*nitro-2-amino-. See Picramic acid.
nitroso-, dyes (DECKER and SOLONINA), A., i, 197.
Phenol ethers containing the *ψ*-allyl chain, R·CMe:CH_2 (BÉHAL and TIFFENEAU), A., i, 883.
di-*o*-substituted, the Zeisel reaction in (BOYD and PITMAN), T., 1255 ; P., 221.
Phenol sulphides, mixed (TABOURY), A., i, 56.
Phenols, ultra-violet absorption spectra of (BALY and EWBANK), T., 1347 ; P., 203.
and their ethers dissolved in benzene and *m*-xylene, dielectric constants of (PHILIP and HAYNES), T., 998 ; P., 200.
nuclear synthetical equilibrium between bicarbonates, phenolcarboxylic acids, and, in aqueous solution (HÄLLSTRÖM), A., ii, 511.
action of bromine and chlorine on (ZINCKE and MÜNCH), A., i, 55 ; (ZINCKE and WAGNER), A., i, 342.

Phenols, phenylation of (ULLMANN, SPONAGEL, and STEIN), A., i, 644.
condensation of, with ψ-phenols (AUWERS and RIETZ), A., i, 887.
compounds of, with alkali phenoxides (GENTSCH), A., i, 341.
action of zinc chloride on acid esters of (EIJKMAN, BERGEMA, and HENRARD), A., i, 359.
polyhydric, action of hippuryl chloride on (FISCHER), A., i, 892.
a reagent for (ALOY and LAPRADE), A., ii, 616.
colour reactions for (GUÉRIN), A., ii, 209.
their isomerides, and higher organic compounds, new general colour reagent of the (ALVAREZ), A., ii, 359.
Phenols, amino-, formation of, from hydroxyazo-compounds (ODDO and PUXEDDU), A., i, 842.
2:4-*di*nitro-, the purpurate reaction with (BORSCHE and BÖCKER), A., i, 51.
nitroso-, constitution of, and the conception of ortho-, meta-, and para-positions (VIDAL), A., i, 521.
ψ-Phenols, condensation of, with phenols (AUWERS and RIETZ), A., i, 887.
Phenolcarboxylic acids, nuclear synthetical equilibrium between bicarbonates, phenols, and, in aqueous solution (HÄLLSTRÖM), A., ii, 511.
Phenolglycuronic acid (NEUBERG and NEIMANN), A., i, 412.
estimation of (NEUBERG and NEIMANN), A., ii, 426.
Phenolphthalein salts, constitution of (MEYER and SPENGLER), A., i, 440.
β-Phenonaphthaxanthone (ULLMANN and ZLOKASOFF), A., i, 598.
Phenoquinone, dissociation of (TORREY and HARDENBERGH), A., i, 218.
Phenosafranine and Ris's amino-derivative (BARBIER and SISLEY), A., i, 841.
Phenothioxin, 1:3-*di*amino-, and its acyl derivatives and 1:3-*di*nitro-, and their oxides (MAUTHNER), A., i, 461.
Phenoxide-*o*-carboxylic acid, sodium. See *o*-Sodoxybenzoic acid.
Phenoxides, alkali, compounds of, with phenols (GENTSCH), A., i, 341.
Phenoxyacetic acid, ethyl ester, condensation of, with benzaldehyde (STOERMER and KIPPE), A., i, 526.
2:5-*di*nitro-4-amino-, and its acetyl derivative (REVERDIN and DRESEL), A., i, 430.
***p*-Phenoxyacetophenone** (KIPPER), A., i, 648.
4-Phenoxy-2-amino- and -2-nitro-benzenesulphonic acids (BADISCHE ANILIN- & SODA-FABRIK), A., i, 271.
ε-Phenoxyamylamine, benzoyl derivative (v. BRAUN and STEINDORFF), A., i, 206.
Phenoxyanthraquinones, 1- and 2- (FARBENFABRIKEN VORM. F. BAYER & CO.), A., i, 797.
1-Phenoxyanthraquinone-6-sulphonic acid (FARBENFABRIKEN VORM. F. BAYER & CO.), A., i, 798.
***p*-Phenoxybenzophenone** (KIPPER), A., i, 648.
***p*-Phenoxybenzoylbenzoic acid** (KIPPER), A., i, 648.
β-*p*-Phenoxybenzoylpropionic acid (KIPPER), A., i, 648.
α-Phenoxycinnamic acid, elimination of carbon monoxide and carbon dioxide from (STOERMER and BIESENBACH), A., i, 524.
aniline salt (STOERMER and KIPPE), A., i, 527.
4-Phenoxy-1-ethylphthalazone (DAUBE), A., i, 210.
ε-Phenoxyhexoic acid and its silver salt and amide (v. BRAUN and STEINDORFF), A., i, 342.
ε-Phenoxyhexonitrile (v. BRAUN and STEINDORFF), A., i, 207.
ζ-Phenoxyhexylamine and its additive salts and derivatives (v. BRAUN and STEINDORFF), A., i, 826.
2-Phenoxy-5-methoxybenzoic acid (ULLMANN and KIPPER), A., i, 596.
ε-Phenoxypentane, α-bromo-, α-chloro-, α-cyano-, and α-iodo- (v. BRAUN and STEINDORFF), A., i, 341.
α-Phenoxy-β-phenylhydracrylic acid and its acetyl derivative and aniline and sodium salts (STOERMER and KIPPE), A., i, 527.
ω-Phenoxystyrene and its bromides (STOERMER and BIESENBACH), A., i, 525.
Phenyl benzyl sulphide and *p*-bromo- and *p*-chloro- (TABOURY), A., i, 56.
chlorocarbonate, reaction of, with potassium thiocyanate in presence of benzene and amines (DORAN and DIXON), T., 342; P., 77.
dimethylaminoethyl ether and its aurichloride (KNORR), A., i, 813.
ether, *m*-nitro- (ULLMANN, SPONAGEL, and STEIN), A., i, 644.
nitroamino-derivatives (REVERDIN and DRESEL), A., i, 430.
See also Phenoxides.
ethyl carbonate, amino-, and its acetyl derivative and carbamide, and nitro- (A. and L. LUMIÈRE and PERRIN), A., i, 588.

Phenyl methyl sulphide, *p*-bromo- (TABOURY), A., i, 57.
sulphide, *op-di*amino-. See Aniline, thio-.
o-chloro- (FRIEDLÄNDER and MAUTHNER), A., i, 102.
*di*sulphide, *di*amino-. See Aniline, *di*thio-.
thiocyanate, 2:4-*di*amino-, yellow sulphur dye from (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 913.
Phenylacetaldehyde, synthesis of (HOUBEN), A., i, 600.
Phenylacetaldehyde-phenylhydrazones and **-semicarbazone** (HENLE), A., i, 490.
Phenylacetic acid, phenyl ester (STOERMER and BIESENBACH), A., i, 525; (WEISL), A., i, 905.
Phenylacetoacetic acid, 2:4-*di*nitro-, ethyl ester, and its reduction products (REISSERT and HELLER), A., i, 59.
Phenylacetoacetyl-6-amino-2-methylindole, 2′:4′-*di*amino-, and its tribenzoyl derivative (REISSERT and HELLER), A., i, 60.
Phenylacetoacetyl-2:4-*di*aminophenylacetoacetic acid, 2:4-*di*amino-, ethyl ester, and its metallic and additive salts and acetyl and benzoyl derivatives (REISSERT and HELLER), A., i, 60.
Phenylacetone, condensation of, with phenanthraquinone (LANG), A., i, 292.
Phenylacetophenylhydrizino-ether (HENLE), A., i, 490.
2-Phenyl-4-*o*-acetoxybenzylideneoxazolone (ERLENMEYER and STADLIN), A., i, 239.
2-Phenyl-4-*m*-acetoxybenzylideneoxazolone (ERLENMEYER and WITTENBERG), A., i, 240.
Phenyl-*p*-acetylamino-*o*-tolylsulphone (ULLMANN and LEHNER), A., i, 290.
Phenylacetylene, action of potassium hydroxide on mixtures of ketones with (FAWORSKY), A., i, 773; (SKOSSAREWSKY; BORK), A., i, 774; (NEWEROWITSCH; BERTRAND; ROMANOFF), A., i, 775.
Phenylacetylenyldimethylcarbinol, synthesis of, and its acetyl derivative (SKOSSAREWSKY), A., i, 774.
Phenylacetylenylmethyl*tert.*-butylcarbinol, synthesis of (NEWEROWITSCH), A., i, 775.
Phenylacetylenylmethylethylcarbinol, synthesis of (BORK), A., i, 774.
Phenylacetylenylmethyl*iso*propylcarbinol, synthesis of (BORK), A., i, 774.
Phenylacridine meth- and eth-iodides (DECKER, GADOMSKA, SANDBERG, and STAVROLOPOULOS), A., i, 375.
Phenylamine. See Aniline.
Phenylamino-. See Anilino-.
9-Phenyl-9-*iso*amyl-10-anthrone and *mono-* and *di*-hydroxy-, and their acetyl derivatives (JÜNGERMANN), A., i, 795.
s-**Phenyl-*sec.*-amylcarbamide** (MAILHE), A., i, 635.
9-Phenyl-9-*iso*amyldihydroanthracene and 10-bromo- (JÜNGERMANN), A., i, 796.
d-**Phenylamylhydrazine** and its hydrochloride and tartaric derivatives (NEUBERG and FEDERER), A., i, 299, 300.
Phenyl *β*-*iso*amylthiol-*γ*-benzylidenepropyl ketone (RUHEMANN), T., 24.
Phenylanisaldoxime (PLANCHER and PICCININI), A., i, 705.
Phenyl-*o*- and -*p*-anisylethylenes and their *ω*-bromo- and *ω*-chloro-derivatives (STOERMER and SIMON) A., i, 53.
Phenylanisylidenenitromethane (KNOEVENAGEL and WALTER), A., i, 66.
5-Phenyl-3-anisyl*iso*oxazole, 4-amino- and 4-nitro- (WIELAND and BLOCH), A., i, 707.
Phenylanthranol, iodo-hydriodo-derivative (LIEBERMANN and MAMLOCK), A., i, 531.
Phenylazocyanoacetic acid, ethyl ester, isomerism of the so-called (HANTZSCH and THOMPSON), A., i, 615.
Phenylazoethane, action of zinc ethyl on (TICHWINSKY), A., i, 93.
Phenylazoformaldoxime and *o*-chloro- (BUSCH and WOLBRING), A., i, 494.
Phenylazo-. See also Benzeneazo-.
Phenylbenzaldoxime and *m*′-nitro- (PLANCHER and PICCININI), A., i, 705.
1-Phenylbenziminazole, 5-amino-, and its acetyl derivative and salts, and 5-nitro-, and the 2-carboxylic acid of the nitro-compound and its ethyl ester (REISSERT and GOLL), A., i, 248.
1-Phenylbenzylaminopyrrole-2:5-dibenzoic acid and its silver salt and ethyl ester (REISSERT and ENGEL), A., i, 900.
Phenylbenzyl-2:5-dimethoxyphenylcarbinol (KAUFFMANN and GROMBACH), A., i, 281.
Phenylbenzylfluorene (KLIEGL), A., i, 187.
Phenylbenzylideneacetophenone (KOHLER and JOHNSTIN), A., i, 215.

Phenylbenzylideneazlactone, action of phenyl mercaptan on (RUHEMANN), T., 468; P., 123.

β-Phenyl-γ-benzylidenebutyrophenone. See β-Phenyl-β-styrylpropiophenone.

Phenylbenzylidenenitromethane (KNOEVENAGEL and WALTER), A., i, 66.

Phenyl benzyl ketone. See Deoxybenzoin.

Phenylbenzylmethylalkylammonium salts, optically active (THOMAS and JONES), A., i, 263.

α-Phenylbenzylmethylallylammonium camphorsulphonates, four isomeric (HARVEY), T., 1481; P., 228.

hydroxide, rotatory power of (WEDEKIND), A., i, 520.

Phenylbenzylmethylallylammonium iodides, *d*- and *l*- (HARVEY), T., 1485; P., 229.

Phenylbenzylmethylpropylammonium bases, resolution of, into their optical antipodes (WEDEKIND and FRÖHLICH), A., i, 878.

1-Phenyl-4-benzyl-3-methylpyrazole, 5-amino-, and its derivatives (MICHAELIS and PREUNER), A., i, 478.

1-Phenyl-4-benzyl-3-methylpyrazolone (MICHAELIS and PREUNER), A., i, 478.

Phenylbenzyltriazen (DIMROTH), A., i, 312.

Phenylbromoacetic acid, preparation of (FISCHER and SCHMIDLIN), A., i, 694.

Phenylbromoacetyl-alanine, -asparagine, -aspartic acid, and **-glycine** (FISCHER and SCHMIDLIN), A., i, 694.

Phenyl-*di*- and -*tri*-bromomethylsulphones (TRÖGER and HILLE), A., i, 336.

Phenylbutadienyltrimethyl*cyclo*pentane (RUPE and FRISELL), A., i, 221.

Phenyl-butenyl(or **butadienyl**)-**trimethyl*cyclo*pentenecarboxylic acid** (RUPE and FRISELL), A., i, 221.

1-Phenyl-4-butyl-5-pyrazolidone(BLAISE and LUTTRINGER), A., i, 628.

β-Phenylbutyric acid and its amide and α-cyano-derivative (KOHLER and REIMER), A., i, 348; (KOHLER), A., i, 701.

β-bromo-α-hydroxy-, ethyl ester (CLAISEN), A., i, 287.

γ-Phenyl-*n*-butyric acid, α-cyano-β-imino-, ethyl ester (ATKINSON and THORPE), P., 305.

Phenylcamphoformeneamine, phenylsulphone of (TINGLE and HOFFMANN), A., i, 800.

Phenylcarbamic hydrazide and its hydrochloride and acetophenone compound (BORSCHE), A., i, 305.

Phenylcarbamide, action of, on acetic acid and its chloro-derivatives (VALLÉE), A., i, 771.

o-, *m*-, and *p*-iodo-, and their acetyl derivatives (DOHT), A., i, 49.

p-nitro- (PIERRON), A., i, 126.

Phenylcarbimide, interaction of, with 1:3-dicarbonyl compounds (DIECKMANN, HOPPE, and STEIN), A., i, 135.

behaviour of hydrogen cyanide towards (DIECKMANN and KÄMMERER), A., i, 874.

action of, on sulphonic acids (VALLÉE), A., i, 771.

as a reagent for determining the constitution of tautomeric compounds (MICHAEL), A., i, 195; (GOLDSCHMIDT), A., i, 340.

Phenyl-2:3:6-*tri*chloro-4-hydroxyphenylamine, *s-tri*chloro-, and its benzoyl derivative (ORTON and SMITH), T., 391; P., 92.

Phenyl*tri*chloromethylcarbinol and its benzoate (DINESMANN), A., i, 645.

Phenylchrysofluorene and its alcohol (ULLMANN and MOURAWIEW-WINIGRADOFF), A., i, 642.

Phenylcinnamaldoxime (PLANCHER and PICCININI), A., i, 706.

α-Phenylcinnamenylacrylic acid, nitro-, methyl ester, oxidation of (HINRICHSEN and REIMER), A., i, 132.

α-Phenylcinnamic acid, esters, action of magnesium organic compounds on (KOHLER and HERITAGE), A., i, 208.

β-Phenylcinnamic acid (KOHLER and HERITAGE), A., i, 208; (KOHLER and JOHNSTIN), A., i, 215.

2-Phenyl-4-cinnamylideneoxazolone (ERLENMEYER and MATTER), A., i, 238.

α-Phenyl*iso*crotonic acid, hydroxy- (ERLENMEYER), A., i, 785.

Phenylcuminaldoxime (PLANCHER and PICCININI), A., i, 706.

Phenyl-ψ-cumylhydrazine, 5-chloro-2-nitro-, and *op-di*nitro- (WILLGERODT and HERZOG), A., i, 549.

2-Phenyl-4-cumylideneoxazolone (ERLENMEYER and MATTER), A., i, 238.

Phenylcyanamide, *o*-, *m*-, and *p*-nitro-, and their benzoyl derivatives (PIERRON), A., i, 125.

Phenyl-α-cyanoacrylamide, 3:4-*di*hydroxy-, and its 3-methyl ether, bromo-derivatives of (PICCININI), A., i, 599.

***a*-Phenyl-*bb*-di-*sec.*-amylcarbamide** (MAILHE), A., i, 635.

2-Phenyl-1:3-dibenzylhydrobenziminazole, *o*-hydroxy- (FISCHER and VEIEL), A., i, 246.

Phenyldibutylhydrazine bromide and iodide (ALLAIN LECANU), A., i, 376.

1-Phenyl-5:5-diethylbarbituric acid (FISCHER and DILTHEY), A., i, 36; (CONRAD and ZART), A., i, 753.

4-imino- (CONRAD and ZART), A., i, 753.

Phenyldiethylhydrazine (TICHWINSKY), A., i, 92, 93.

Phenyldiguanide, amino- and nitro-derivatives, and their additive salts (HERMANN), A., i, 950.

p-hydroxy-, salts of (A. and L. LUMIÈRE and PERRIN), A., i, 250.

α-Phenyldihydroberberine and its salts (FREUND and BECK), A., i, 151.

Phenyldihydrothebaine and its additive salts, methyl and ethyl ethers, and acetyl derivative, and their methiodides (FREUND), A., i, 918.

Phenyldihydrothebenol and its methyl and ethyl ethers (FREUND), A., i, 918.

Phenyldihydro-uracil and **-thiouracil** (POSNER), A., i, 578, 776.

Phenyl-2:5-dimethoxyphenylethylcarbinol (KAUFFMANN and GROMBACH), A., i, 281.

α-Phenyl-α-2:5-dimethoxyphenylpropylene and its bromo-derivatives (KAUFFMANN and GROMBACH), A., i, 281.

5-Phenyl-3:7-dimethylacridine, 2:8-*di*amino-. See Benzoflavine.

Phenyldimethylaminoethylcarbinol and its additive salts and benzoyl derivative (FOURNEAU), A., i, 57.

β-Phenyl-αα-dimethylbutyrolactone (BLAISE and COURTOT), A., i, 563.

Phenyldimethylcarbinol (MATSUBARA and PERKIN), T., 671.

Phenyldimethylethylammonium salts (WILLCOX), A., i, 45.

Phenyldimethylethyl-1-ethyl-ψ-dithiobiurets (BILLETER and RIVIER), A., i, 50.

Phenyldi-2-methyl-1-ethylindylmethane, *o*-hydroxy- and *o*-nitro- (FREUND and LEBACH), A., i, 665.

Phenyldimethylhydrazine iodide (ALLAIN LECANU), A., i, 376.

1-Phenyl-2:3-dimethyliminopyrazole. See Iminopyrine.

Phenyldi-2-methyl-indyl- and **-indolidene-methanes**, chloro-, hydroxy-, and nitro-derivatives (FREUND and LEBACH), A., i, 665.

6-Phenyl-3:4-dimethyl-1:2:5-oxadiazine, 4-hydroxy-, and its derivatives (DIELS and VAN DER LEEDEN), A., i, 947.

1-Phenyl-2:5-dimethyl-2:3-oxypyrazole (3-*antipyrine*) and its ψ-methiodide (MICHAELIS and MEYER), A., i, 378.

Phenyl-αα- and **-αβ-dimethylpropylsulphones** (POSNER and TSCHARNO), A., i, 279.

1-Phenyl-2:3-dimethylpyrazolone. See Antipyrine.

1-Phenyl-2:4-dimethyl-5-pyrazolone (STOLZ), A., i, 942.

Phenyldinaphthaxanthen, amino- (ROBYN), A., i, 608.

Phenyldiphenylenemethane and the corresponding carbinol, amino-derivatives of (GUYOT and GRANDERYE), A., i, 248.

1-Phenyl-2:3-*o*-diphenylene*cyclo*pentanone and its phenylhydrazone (LANG), A., i, 292.

2-Phenyl-5-diphenylmethylbenziminazole and its additive salts (THOMAE), A., i, 587.

Phenyldipropylhydrazine bromide and iodide (ALLAIN LECANU), A., i, 375.

Phenyldi-*p*-tolyl-carbinol and **-methane** (KLIEGL), A., i, 186.

***p*-Phenylenebis-2:3:7-*tri*hydroxyfluorone** and its sulphate and acetyl derivative (HEINTSCHEL), A., i, 809.

***o*-Phenylenediamine**, condensation of, with phthalonimide (GABRIEL), A., i, 97.

oxidation of, and its compound with silver nitrate (WILLSTÄTTER and PFANNENSTIEL), A., i, 723.

*p-di*chloro- (NOELTING and KOPP), A., i, 873.

***m*-Phenylenediamine**, symmetrically disubstituted, azo-derivatives of (MORGAN and WOOTTON), T., 937; P., 179.

6-bromo-4-nitro- and 6-chloro-4-nitro-, and their diacetyl derivatives, and 2:6-*di*bromo-3-nitro-, and *di*iodo- (MORGAN and WOOTTON), T., 938; P., 179.

s-nitro-, and its diacetyl derivative (FLÜRSCHEIM), A., i, 615.

***p*-Phenylenediamine**, monoacyl derivatives, action of nitrous acid on (MORGAN and MICKLETHWAIT), T., 930; P., 179.

*di*chloro-, *N*-diacetyl derivative of (NOELTING and KOPP), A., i, 873.

***o*-Phenylenedimethyldiamine**, 4-bromo- (FISCHER and MOUSON), A., i, 246.

***p*-Phenylenedimethyldiamine** and its derivatives (WILLSTÄTTER and PFANNENSTIEL), A., i, 669.

***m*-Phenylenedisulphon-acetonitrile** and **-thioacetamide** (TRÖGER and HILLE), A., i, 337.

***m*-Phenylenedisulphondiethenylaminoxime** (TRÖGER and VOLKMER), A., i, 356.

p-**Phenylenemethyldiamine** (Willstätter and Pfannenstiel), A., i, 669.

2-Phenylene-6-methylpyridine ketone. See 2-*o*-Benzylenone-6-methylpyridine.

α-Phenylethane, β-nitro-α-hydroxy-, and its ethers (Meisenheimer and Heim), A., i, 269.

dl-**Phenylethoxyacetic acid,** *l*-bornyl and *l*-menthyl esters, hydrolysis of, by alkali (McKenzie and Thompson), T., 1010; P., 184.

l-**Phenylethylamine** (Kipping and Hunter), P., 126.

α-Phenylethylamine, optically active, and their derivatives (Marckwald and Meth), A., i, 273; (Lovén), A., i, 875.

β-Phenylethylamine, hydroxy-. See 2-Ethylphenol, β-amino-.

2-Phenylethylamino-5-methyl-4:5-dihydrothiazole and its platinichloride (Young and Crookes), P., 308.

s-**Phenylethylcarbamidoazobenzene** (Dimroth), A., i, 311.

Phenylethylene, ω-nitro-, action of alkalis on (Meisenheimer and Heim), A., i, 269.

β-Phenyl-β-ethylethylenelactic acid. See β-Phenylvaleric acid, β-hydroxy-.

β-Phenyl-β-ethylglycidic acid, ethyl ester (Claisen), A., i, 287.

s-**Phenylethylhydrazine** (Tichwinsky), A., i, 93.

β-Phenylethylmalonic acid and its ethyl ester (Kohler and Reimer), A., i, 348; (Kohler), A., i, 701.

Phenyl-*p*-ethylphenylhydrazine, *op-di*nitro- (Willgerodt and Hartrer), A., i, 552.

Phenylethylphenylmethylsuccinic acid, synthesis of (Eijkman), A., i, 529.

1-Phenyl-4-ethyl-5-pyrazolidone and **-5-pyrazolone** (Blaise and Luttringer), A., i, 627.

Phenylethyltriazen and its metallic and acetyl derivatives (Dimroth), A., i, 311, 618.

β-Phenylethyltrimethylammonium iodide, hydroxy- (Pschorr and Einbeck), A., i, 590.

9-Phenylfluorene and 9-bromo-, 9-chloro-, 2-nitro-, and *tetra*nitro- (Kliegl), A., i, 187.

Phenylfluorenol and its acetate and methyl and ethyl ethers (Kliegl), A., i, 187.

9-Phenylfluorone, *m*-bromo-*m*-nitro-2:3:7-*tri*hydroxy-, and 5′-nitro-2:3:7:2′-*tetra*hydroxy-, and their sulphates and acetyl derivatives (Heintschel), A., i, 809.

2-Phenyl-4-furfurylideneoxazolone (Erlenmeyer and Stadlin), A., i, 238.

Phenylfuryl-1:3:4-oxadiazole and its silver nitrate compound (Stollé and Münch), A., i, 95.

Phenylglutaconimide, cyano-, and its metallic derivatives (Guareschi), A., i, 824.

Phenylglycine (*anilinoacetic acid*), preparation of (de Mouilpied), T., 438.

2:4-*di*nitro-, and its salts (Sanna), A., i, 48.

Phenylglycine-alanines and **-asparagine** and its anhydride (Fischer and Schmidlin), A., i, 694.

Phenylglycine-*o*-carboxylic acid, *p*-bromo-, ethyl ester (Chemische Fabrik von Heyden), A., i, 647.

Phenylglycinoacetic acid, esters, condensation of, in presence of sodium alkyloxides (de Mouilpied), T., 435; P., 63.

β-Phenylglycinopropionic acid and its esters, preparation of, and condensation of the esters (de Mouilpied), T., 441; P., 64.

Phenylglycylglycine (Fischer and Schmidlin), A., i, 694.

5-Phenylglyoxaline and its 1-ethyl derivative (Pinner), A., i, 476.

α-Phenyl-Δ$^{\beta}$-hepten-ε-one and its semicarbazone (Rupe and Speiser), A., i, 352.

Phenyl-mono- and **-di-*iso*hexylcarbamides** (Sabatier and Senderens), A., i, 268.

Phenylhomosalicylaldoxime (Plancher and Piccinini), A., i, 705.

Phenylhydrazine and *p*-bromo-, action of benzyl chloride and *o*- and *p*-nitrobenzyl chlorides on (Flaschner), A., i, 936.

action of, on alkyl bromides and iodides (Allain Lecanu), A., i, 375.

2:5-*di*chloro-, and its derivatives and **sulphonic acid** (Noelting and Kopp), A., i, 872.

Phenylhydrazoformaldoxime, *o-mono-* and *p-ω-di*-chloro- (Busch and Wolbring), A., i, 494.

Phenylhydrazonecyanoacetic acid, ethyl ester, α- and β-modifications of (Hantzsch and Thompson), A., i, 615.

Phenylhydrazonemesoxalic acid and *p*-bromo-, ethyl esters (Hantzsch and Thompson), A., i, 615.

Phenylhydrazones, thermochemistry of (Landrieu), A., ii, 628.

Phenylhydrizinoaminomethylenecarboxylic acid and its ethyl ester, and *p*-chloro-, and amide (BOWACK and LAPWORTH), T., 1864.

Phenylhydrizinohalogenmethylenecarboxylic acids and their bromo-, chloro-, and nitro-derivatives, ethyl esters (BOWACK and LAPWORTH), T., 1857.

Phenylhydroxyacetylalanine (FISCHER and SCHMIDLIN), A., i, 694.

β-Phenylhydroxylamine, compounds of, with aromatic aldehydes (PLANCHER and PICCININI), A., i, 705.

Phenylhydroxypyrrolinecarboxylic acid and its ethyl ester (DE MOUILPIED), T., 443; P., 64.

Phenylimino-2:3:6-*tri*chlorobenzoquinone, *s-tri*chloro- (ORTON and SMITH), T., 390; P., 92.

2-Phenylimino-3:4-dimethyl-2:3-dihydrothiazole and its platinichloride (YOUNG and CROOKES), P., 308.

Phenylimino-α-ethoxynaphthyl-4-ethoxynaphthatriazine (BUSCH and BERGMANN), A., i, 310.

2-Phenylimino-5-methyltetrahydrothiazole and its acetyl and silver derivatives (YOUNG and CROOKES), P., 308.

2:5-Phenylimino-1-β-naphthyl-2:3-dimethylpyrazole (1-β-*naphthylanilopyrine*) and its derivatives (MICHAELIS and DANZFUSS), A., i, 481.

2:5-Phenylimino-1-phenyl-2:3-dimethylpyrazole (*anilopyrine*) and its derivatives (MICHAELIS and HEPNER), A., i, 480.

Phenyliminophenyl-naphthatriazine, -bromonaphthatriazine, -4-ethoxynaphthatriazine, and -4-ethoxydihydronaphthatriazine (BUSCH and BERGMANN), A., i, 310.

Phenyliminotolyltolutriazine, *m*-nitro- (BUSCH and BERGMANN), A., i, 309.

2-Phenylindole, 3-nitroso-, ethyl ether of (CASTELLANA and D'ANGELO), A., i, 940.

β-Phenyl-β-lactamide and the action of sulphuric acid on (POSNER), A., i, 577.

2-Phenyl-*p*-methoxybenzylideneoxazolone (ERLENMEYER and WITTENBERG), A., i, 240.

Phenylmethylacridol, constitution of (DOBBIE and TINKLER), T., 269; P., 74.

Phenylmethylamino-dimethyl- and -ethyl-carbinols and their additive salts and dibenzoyl derivatives (FOURNEAU), A., i, 57.

***o*-Phenylmethylamino*cyclo*hexanol** (BRUNEL), A., i, 869.

1-Phenylmethylaminopyrrole-2:5-dibenzoic acid and its salts, ester, and anhydride (REISSERT and ENGEL), A., i, 899.

Phenyl-α-methylbenzylsulphone (POSNER and TSCHARNO), A., i, 279.

***s*-Phenylmethylcarbamidoazobenzene** (DIMROTH), A., i, 311.

5-Phenyl-2-methyl-4:5-dihydro-1:3:4-oxadiazole and its 4-acetyl and 4-benzoyl derivatives (STOLLÉ and MÜNCH), A., i, 95.

3-Phenyl-2-methyldihydroquinazoline, 6:*p-di*nitro-, sulphoacetate, acetylsulphate, and ethyl sulphate of (STILLICH), A., i, 318.

2-Phenyl-1-methyldihydroquinoline and its 3-(or 4-)bromo-, methobromide of (FREUND and SPEYER), A., i, 156.

Phenylmethylethyldihydroacridine (FREUND and SPEYER), A., i, 157.

***s*-Phenylmethylethylene.** See α-Phenylpropylene.

Phenylmethylethylene oxide and its conversion into hydratropaldehyde (KLAGES; TIFFENEAU), A., i, 523.

β-Phenyl-β-methylglycidic acid and its esters, amides, and salts (CLAISEN), A., i, 287.

1-Phenyl-3-methylpyrazole, 5-amino-, and its derivatives (MICHAELIS and BRUST), A., i, 477.

5-chloro-4-amino- (MICHAELIS, LEONHARDT, and WAHLE), A., i, 392.

1-Phenyl-5-methylpyrazole, 3-*mono*- and 3:5-*di*chloro- and 3-chloro-4-bromo-, and the alkyl haloids of the 3-chloro-compound (MICHAELIS and MEYER), A., i, 378.

1-Phenyl-3-methylpyrazole-4-azobenzene and its 5-chloro-, 5-iodo-, 5-thio-, 5-thioalkyl-, and 5-alkylsulphone derivatives, and 5-mono- and di-sulphides (MICHAELIS, LEONHARDT, and WAHLE), A., i, 392.

1-Phenyl-5-methylpyrazole-4-azobenzene, 3-chloro- (MICHAELIS and BEHRENS), A., i, 396.

1-Phenyl-3-methylpyrazole-*o*- and -*p*-azotoluenes and their 5-chloro- and 5-thio-derivatives (MICHAELIS, LEONHARDT, and WAHLE), A., i, 394.

Phenylmethylpyrazolone, condensation of, with ethyl acetoacetate (STOLLÉ), A., i, 838.

1-Phenyl-3-methylpyrazolone, condensation product of (MOHR), A., i, 676.

1-Phenyl-4-methyl-5-pyrazolone and its isomeride (MICHAEL), A., i, 564; (STOLZ), A., i, 942.

1-Phenyl-5-methyl-3-pyrazolone and its salts, benzoyl, aldehydic, and 4-bromo-, and 4-chloro-derivatives (MICHAELIS and MEYER), A., i, 377.

nitroso- (MICHAELIS), A., i, 244.

1-Phenyl-5-methyl-3-pyrazolone-4-azobenzene and its salts and benzenesulphonyl derivative (MICHAELIS and BEHRENS), A., i, 396.

1-Phenyl-3-methyl-5-pyrazolone-*o*- and -*p*-azotoluenes (MICHAELIS, LEONHARDT, and WAHLE), A., i, 394.

1-Phenyl-3-methyl-5-pyrazolone-4-phenylhydrazone and *p'*-nitro- (WAHL), A., i, 474.

Phenylmethylpyrazylphenylmethylpyrazolone (MOHR), A., i, 676; (STOLLÉ), A., i, 839.

2-Phenyl-6-methylpyridine, 3-cyano-4-hydroxy- and 4-hydroxy- (V. MEYER), A., i, 155.

2-Phenyl-6-methyl-4-pyridone, 3-cyano- (V. MEYER), A., i, 155.

Phenylmethylpyrrole, 3-nitroso-, trioxime of, and its benzoyl derivative (ANGELICO), A., i, 659.

2-Phenyl-1-methyltetrahydroquinoline (FREUND and SPEYER), A., i, 156.

Phenylmethyltriazen and its metallic and acetyl derivatives (DIMROTH), A., i, 311, 618.

1-Phenyl-5-methyl-3-triazenylamidrazone (RINMAN), A., i, 387.

1-Phenyl-4-methyl-1:2:3-triazole, 5-hydroxy-, and its derivatives (DIMROTH and LETSCHE), A., i, 100.

2-Phenylnaphthalene-1-carboxylic acid. See β-Chrysenic acid.

2'-Phenylnaphthalene-1:2'-dicarboxylic acid. See Chrysodiphenic acid.

Phenylnaphthaxanthen, *p*-hydroxy-, and its acyl derivatives (ROGOFF), A., i, 884.

1-Phenylnaphthylamine-8-sulphonic acid, preparation of (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 717.

1-Phenylnaphthylamine-6- and -7-sulphonic acids (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 770.

9-Phenyl-10-α-naphthylanthracene (GUYOT and STAEHLING), A., i, 887.

Phenyl-α-naphthylbromoethylene and its isomeride (STOERMER and SIMON), A., i, 53.

9-Phenyl-10-α-naphthyldihydroanthracene and 9:10-*di*hydroxy-, and its dichloride and dimethyl and diethyl ethers (GUYOT and STAEHLING), A., i, 887.

β-Phenyl-β-naphthylmethylmalonamic acid (KOHLER and REIMER), A., i, 348.

Phenyl-α- and -β-naphthyl-methyl- and -ethyl-thiocarbamides (BILLETER and RIVIER), A., i, 50.

β-Phenyl-β-naphthylpropionic acid, α-cyano-, ethyl ester (KOHLER and REIMER), A., i, 348.

Phenylnaphthylpropiophenone (KOHLER and JOHNSTIN), A., i, 216.

Phenyl-*m*-nitrobenzylidenehydrazine, action of amyl nitrite on (MINUNNI), A., i, 91.

Phenylnitroethanol, secondary (HOLLEMAN), A., i, 58.

Phenyl*iso*oxazolone (POSNER), A., i, 577; (TINGLE), A., i, 930.

ε-Phenyl-$\Delta^{\alpha\gamma}$-pentadiene-ε-one-α-carboxylic acid, **αβ-*di*bromo-**, sodium salt (DIECKMANN and PLATZ), A., i, 118.

ε-Phenyl-Δ^{α}-pentene-γ-ol-ε-one-α-carboxylic acid, **αβ-*di*bromo-** and **αβ-*di*chloro-**, lactones of (DIECKMANN and PLATZ), A., i, 118.

Phenylphenacyl-oxamethane and **-urethane** (MASELLI), A., i, 776.

Phenyl-β-phenylalkylsulphones (POSNER and TSCHARNO), A., i, 279.

Phenyl-β-phenylbutenylsulphone (POSNER and TSCHARNO), A., i, 279.

Phenylphenylene-β-naphthylenemethane (ULLMANN and MOURAWIEW-WINIGRADOFF), A., i, 642.

Phenyl β-phenylthiol-γ-benzylidenepropyl ketone (RUHEMANN), T., 24.

Phenylpiperonaldoxime (PLANCHER and PICCININI), A., i, 705.

Phenylpiperonylidenenitromethane (KNOEVENAGEL and WALTER), A., i, 66.

α-Phenylpropaldehyde. See Hydratropaldehyde.

α-Phenylpropane, **βγ-*di*bromo-** (AGEEWA), A., i, 776.

β-Phenylpropane-αα'γ-tricarboxylic anhydride, 2-hydroxy- (KNOEVENAGEL and ARNOT), A., i, 65.

Phenylpropiolic acid, preparation of (SUDBOROUGH and JAMES), P., 87.

Phenylpropiolyl chloride, action of, on ketonic compounds (RUHEMANN and MERRIMAN), T., 1383; P., 224.

β-Phenylpropionic acid (*hydrocinnamic acid*), benzyl ester (BACON), A., i, 205.

o-amino-, and its *N*-benzoyl derivative (REISSERT), A., i, 926.

p-amino- and *p*-nitro- (MARIE), A., i, 554.

β-amino-, and its metallic and additive salts, β-hydroxy-, and β-hydroxylamino- (POSNER), A., i, 577, 776.

γ-Phenylpropyl iodide and ether (AGEEWA), A., i, 776.
γ-Phenylpropylcamphor (RUPE and FRISELL), A., i, 221.
Phenyl*cyclo*propyl-carbamide and -thiocarbamide (KIJNER), A., i, 517.
Phenylpropylenes, α- and **γ-**, and the reversible isomeric process taking place between, on heating with anhydrous alkali hydroxide (AGEEWA), A., i, 776.
Phenylpropylene oxide (FOURNEAU and TIFFENEAU), A., i, 591.
1-Phenylpyrazole, 4-bromo- and 4-chloro- (DIECKMANN and PLATZ), A., i, 117.
Phenylpyrazoles, azo-compounds of, and their halogen and thio-derivatives (MICHAELIS, LEONHARDT, WAHLE, SIMON, and BEHRENS), A., i, 392.
1-Phenylpyrazole-4-azobenzene, 3-*mono*-3:5-*di*-chloro- (MICHAELIS and SIMON), A., i, 395.
1-Phenylpyrazole-4-*p*-azotoluene, 3-chloro-, and its 5-sulphide, 3:5-*di*-chloro-, and 3-chloro-5-iodo-, 3-thioalkyl, 3-methylsulphone, and 3-thiobenzoate (MICHAELIS and SIMON), A., i, 395.
Phenylpyrazoline ketone (AZZARELLO), A., i, 941.
1-Phenyl-5-pyrazolone-4-azobenzene, 3-chloro- and 3-chloro-5-thio- (MICHAELIS and SIMON), A., i, 395.
1-Phenyl-5-pyrazolone-4-*p*-azotoluene, 3-chloro- and 3-chloro-5-thio- (MICHAELIS and SIMON), A., i, 396.
Phenylpyridinium chloride, chloro- (ZINCKE and WÜRKER), A., i, 242.
*di*nitro-, and its transformation products (ZINCKE), A., i, 467.
action of aliphatic amines on (ZINCKE and WÜRKER), A., i, 923.
action of secondary aromatic amines on (ZINCKE and WÜRKER), A., i, 241.
1-Phenylpyridinium chloride, 3-chloro-, and its platinichloride (DIECKMANN), A., i, 411.
1-Phenylpyrrole, 2:3:4:5-*tetra*chloro- (OKADA), A., i, 875.
Phenylpyruvic acid, condensation of, with benzaldehyde (ERLENMEYER), A., i, 784.
o-hydroxy- (ERLENMEYER and STADLIN), A., i, 239.
2-Phenylquinoline, 3-(or 4-)bromo- (FREUND and SPEYER), A., i, 157.
2-Phenylquinoline-3-carboxylic acid, 4-hydroxy-, ethyl ester (v. NIEMENTOWSKI), A., i, 611.
3-Phenylrhodanic acid and its condensation with aldehydes, and *o*-hydroxy- (ANDREASCH and ZIPSER), A., i, 931.
Phenylrosinduline, *tri*hydroxy- (KALLE & Co.), A., i, 554, 840.
Phenylsalicylaldoxime (PLANCHER and PICCININI), A., i, 705.
4-Phenylsalicylic acid, *p*-hydroxy-, and its salts (FAURE), A., i, 350.
Phenylsemicarbazide, action of, on phthalic anhydride (DUNLAP), A., i, 830.
β-Phenyl-β-styrylpropiophenone and its dibromide and oxime (KOHLER), A., i, 358.
1-Phenyl-5-styrylpyrazoline-3-propionic acid (RUPE and SPEISER), A., i, 351.
***p*-Phenylsulphidebenzoic acid** and its barium salt (WEEDEN and DOUGHTY), A., i, 346.
Phenylsulphon-. See Benzenesulphon-.
2-Phenylthiocarbamidoazo-*p*-toluene, *m*-nitro- (BUSCH and BERGMANN), A., i, 309.
Phenylthiolbenzylacetoacetic acid, ethyl ester (RUHEMANN), T., 20.
Phenylthiolbenzyl-acetone, -acetylacetone, -benzoylacetone, and **-benzylideneacetone** (RUHEMANN), T., 20.
Phenylthiolbenzyl-acetophenone, -benzoylacetic acid, ethyl ester, and **-deoxybenzoin** (RUHEMANN), T., 464.
4-Phenylthiolbenzyl-1-phenyl-3-methylpyrazolone-5 (RUHEMANN), T., 467; P., 123.
Phenylthiosalicylic acid, new preparation of (GOLDBERG), A., i, 59.
Phenylthiosulphonic acid, *p*-iodo-, *p*-phenylenediamine salt (TRÖGER and VOLKMER), A., i, 90.
1-Phenyl-1:2:3-triazole, *p*-bromo-5-hydroxy-, and its **4-carboxylic acid** and its ethyl ester and metallic and amine salts (DIMROTH and STAHL), A., i, 386.
5-hydroxy-, and its reactions and derivatives (DIMROTH), A., i, 99.
***C*-Phenyl-*s*-triazole** and its additive salts, and acetyl and carbamido-derivatives (YOUNG), T., 625; P., 131.
1-Phenyl-1:2:3-triazole-4-carboxylic acid, 5-hydroxy-, methyl ester, and its derivatives and keto-modification (DIMROTH), A., i, 98, 383, 384; (GOLDSCHMIDT), A., i, 249.
1-Phenyl-5-triazolone-4-carboxylic acid, *p*-bromo-, and its ethyl ester and sodium salt (DIMROTH and STAHL), A., i, 386.

Phenyl-*p*-tolyldihydro-*p*-tolutriazine (Busch and Bergmann), A., i, 309.
Phenyltolylmethylsuccinic acid, synthesis of (Eijkman), A., i, 529.
Phenyl-*o*-tolylsulphone (Ullmann and Lehner), A., i, 290.
δ-Phenyl-αaδ-trimethyl-fulgenic acid and **-fulgide** (Stobbe, Rose, and Gademann), A., i, 857.
Phenyl-2:4:5-trimethylphenylhydrazine, 5-chloro-2-nitro- and 2:4-*di*- and 2:4:6-*tri*-nitro-, and their derivatives (Willgerodt and Herzog), A., i, 549.
2-Phenyl-4:6:6-trimethyltetrahydro-1:3-oxazine and its platinichloride and nitroso-derivative (Kohn), A., i, 929.
5-Phenyluracil (Wheeler and Bristol), A., i, 486.
Phenylurazole, acetyl derivatives of (Acree), A., i, 160.
β-Phenylvaleric acid, β-hydroxy-, and its salts (Michnowitsch), A., i, 526.
γ-Phenylvaleric acid, α-bromo-, and its potassium salt (Kohler), A., i, 701.
9-Phenylxanthen (Meyer), A., i, 226.
Phenyl-*p*-xylylhydrazine, 5-chloro-2-nitro- and *op-di*nitro- (Willgerodt and Lindenberg), A., i, 551.
Philocatalase in animal tissues (Battelli and Stern), A., ii, 406.
the substance which renders, active in animal tissues (Battelli and Stern), A., ii, 644.
mode of action of (Battelli and Stern), A., i, 623.
Philothionic hydrogen (de Rey-Pailhade), A., i, 728.
Phloroglucinol (1:3:5-tri*hydroxybenzene*) *O*-tricarbanilide of (Dieckmann, Hoppe, and Stein), A., i, 137.
triphenyl ether (Ullmann, Sponagel, and Stein), A., i, 645.
Phloroglucinol, *tri*bromo- (Perkin and Simonsen), T., 858.
2:6-*di*nitro-, triethyl ether (Blanksma), A., i, 431.
Phloroglucinoldicarboxylic acid, *O*-tricarbanilide, ethyl ester (Dieckmann, Hoppe, and Stein), A., i, 137.
Phloroglucinoltrimercuriacetate (Leys), A., i, 434.
Phorone diozonide (Harries and Türk), A., i, 414.
***iso*Phoronecarboxylic acid**, ethyl esters, isomeric, and their reduction (Merling, Welde, and Skita), A., i, 349.
Phosphates. See under Phosphorus.
Phosphor-bronze, estimation of phosphorus in (Dinan), A., ii, 353.
Phosphorescence caused by the β- and γ-rays of radium (Beilby), A., ii, 293.
of zinc sulphide, influence of the gases obtained by heating rare earth minerals on the (Baskerville and Lockhart), A., ii, 624.
Phosphoric and **Phosphorous acids.** See under Phosphorus.
"**Phosphorus**, Bologna" (Vanino and Gans), A., ii, 248.
Phosphorus, red (Schenck), A., ii, 244.
emanation, electrical conductivity of (Bloch), A., ii, 72.
phosphorescence of (Jungfleisch), A., ii, 244.
combustion of, in oxygen, the increase of weight of the phosphorus and the decrease of volume of the oxygen; lecture experiment (Lang), A., ii, 810.
solubility of, in benzene and ether (Christomanos), A., ii, 449.
action of, on organic compounds (Wichelhaus), A., i, 432.
metabolism in man (Tigerstedt), A., ii, 332.
poisoning. See under Poisoning.
Phosphorus *tri*bromide, *tri*chloride, and *tri*iodide (*phosphorous bromide, chloride*, and *iodide*), interaction of, with alcohols (Walker and Johnson), T., 1592; P., 232.
*penta*chloride, action of, on sodamide (Winter), A., ii, 31.
hydride, interference of mercuric chloride with the formation of (Vitali), A., ii, 354.
*sub*iodide and its *rôle* in the allotropic transformation of phosphorus (Boulouch), A., ii, 633.
*pento*xide (*phosphoric oxide*) as a dehydrator (Morley), A., ii, 881.
Phosphorous acid, action of, on polyhydric alcohols (Carré), A., i, 815.
esters (Arbusoff), A., i, 316.
Phosphoric acid, electrical conductivity of ethereal solutions of (Plotnikoff), A., ii, 135.
equilibrium between certain metallic bases in simultaneous contact with (Quartaroli), A., ii, 821.
action of, on polyhydric alcohols (Carré), A., i, 815.
estimation of, colorimetrically (Schreiner and Brown), A., ii, 117.
estimation of, volumetrically (Raschig), A., ii, 284, 553; (Hlavnička), A., ii, 419; (Schultze), A., ii, 482; (Hirt and Steel), A., ii, 857.

Phosphorus:—
Phosphoric acid, estimation of, by means of ammonium phosphomolybdate (BAXTER and GRIFFIN), A., ii, 857.
estimation of, by the citrate method; source of error hitherto overlooked and a modification of avoiding it (SCHENKE), A., ii, 479.
estimation of, by the method of ignition with magnesium nitrate and by that of digestion with acids (HARTWELL, BOSWORTH, and KELLOGG), A., ii, 353.
estimation of, as magnesium pyrophosphate (JÄRVINEN), A., ii, 555.
estimation of, in basic slag (WESTHAUSSER; SVOBODA), A., ii, 419.
estimation of, in food-stuffs (FLEURENT), A., ii, 116; (PELLET), A., ii, 353.
estimation of, in foods, fæces, and urine (DUBOIS), A., ii, 609.
estimation of, in manures (HISSINK and VAN DER WAERDEN), A., ii, 419.
estimation of citrate-soluble, in superphosphates (SEIB), A., ii, 554.
Phosphate, Redonda, occurrence of, in Martinique (LACROIX), A., ii, 536.
Phosphates, action of vegetable acids on (QUARTAROLI), A., ii, 549.
Superphosphates, free acid in (SCHUCHT), A., ii, 610.
estimation of the citrate-soluble phosphoric acid in (SEIB), A., ii, 554.
Phosphorus *penta*sulphide (STOCK and THIEL), A., ii, 703.
Phosphorus organic compounds (MARIE), A., i, 17.
in urine (SYMMERS), A., ii, 102.
platinum halogen organic compounds and their derivatives (ROSENHEIM and LEVY), A., i, 183.
Phosphorus, detection of free yellow, in phosphorus sulphide (VIGNON), A., ii, 479.
estimation of, colorimetrically, in iron (HEWITT), A., ii, 353.
estimation of, in iron ores (ROWLAND and DAVIES), A., ii, 116.
estimation of, in phosphorised oil (ENELL; RUPP), A., ii, 763.
Phosphorus-group, phenyl derivatives of elements of the (PFEIFFER, HELLER, and PIETSCH), A., i, 164.
PHOTOCHEMISTRY:—
Light, chemical action of (CIAMICIAN and SILBER), A., i, 335, 414; (JORISSEN and RINGER), A., i, 354; (BERTHELOT), A., ii, 3.
PHOTOCHEMISTRY:—
Light, emission of, from the vapours of alkali metals and their salts, and the centres of this emission (LENARD), A., ii, 565.
ultra-violet, action of, on moist and dried mixtures of carbon monoxide and oxygen (CHADWICK, RAMSBOTTOM, and CHAPMAN), P., 287.
action of, on glass (FISCHER), A., ii, 320; (AVERY), A., ii, 589.
Photochemical reactions, reversible, in homogeneous systems (LUTHER and WEIGERT), A., ii, 785.
Photoelectric phenomena exhibited by moist silver iodide (SCHOLL), A., ii, 297.
Photographic action, sensitiveness of, due to hydrogen peroxide (PRECHT and OTSUKI), A., ii, 296, 495.
activity of ozone (SCHAUM), A., ii, 295.
development, the reversibility of, and the retarding action of soluble bromides (SHEPPARD), T., 1311; P., 223.
plate, effects produced by radium bromide on a (PETRI), A., ii, 431.
plates, spontaneous action of metals on sensitive films of, without direct contact (KAHLBAUM and STEFFENS), A., ii, 295.
radiation of some mercury compounds (STRUTHERS and MARSH), T., 377; P., 67.
processes, theory of (SHEPPARD and MEES), A., ii, 294, 784.
Photographs of spark spectra (ADENEY), A., ii, 493.
Photography, three-colour, fundamental principles of (PRECHT and STENGER), A., ii, 566.
Optical activity, relation of, to position isomerism (COHEN and ARMES), T., 1190; P., 218; (COHEN and ZORTMAN), P., 306.
properties in relation to chemical constitution (ARMSTRONG and ROBERTSON), T., 1272; P., 180.
superposition, studies in (PATTERSON and TAYLOR), T., 33.
Optically active bornyl and menthyl esters, racemisation phenomena occurring during the hydrolysis of, by alkali (MCKENZIE and THOMPSON), T., 1004; P., 184.
compound, evidence for the possibility of resolving a, without actually resolving it and without the aid of optically active substances (MOHR), A., i, 428.

PHOTOCHEMISTRY:—
Optically active compounds, influence of solvents on the rotation of (PATTERSON and TAYLOR), T., 122; P., 15; (PATTERSON), T., 313; P., 78.
substances, the primary production of (BYK), A., ii, 70.
rotation of (WALDEN), A., ii, 130; (WINTHER), A., ii, 493.
Radiant energy, relation between the power of absorption of, and chemical character (BYK), A., ii, 566.
***n*-Rays**, demonstration of (BORDIER), A., ii, 6.
Radiations and emanations (BERTHELOT), A., ii, 3.
secondary, and atomic structure (MCCLELLAND), A., ii, 495, 496.
produced in atmospheric air by the rays from radiotellurium (WALTER), A., ii, 567.
from ordinary materials (CAMPBELL), A., ii, 296.
from hydrogen peroxide (PRECHT and OTSUKI), A., ii, 296, 495.
Radioactive element, new, which emits thorium radiations (HAHN), A., ii, 432, 789; (RAMSAY), A., ii, 789.
elements, the ultimate disintegration products of (BOLTWOOD), A., ii, 788.
minerals (STRUTT), A., ii, 787.
noble earths in Fango mud and soil from Capri (GIESEL), A., ii, 132.
properties of air, soil, and water in and around Halle (SCHENK), A., ii, 432.
substance discovered in the Transvaal and experiments connected therewith (COUSENS), A., ii, 787.
See also Actinium, Emanium, Monazite, Polonium, Radiotellurium, Radiothorium, Radium, Tellurium, Thorium, and Uranium.
Radioactivation by means of uranium (BECQUEREL), A., ii, 567.
Radioactivity, present problems of (RUTHERFORD), A., ii, 218.
as an atomic property (MCCOY), A., ii, 366.
genesis of temporary (SARASIN, TOMMASINA, and MICHELI), A., ii, 3.
and chemical change (CAMPBELL), A., ii, 296.
in high latitudes (SIMPSON), A., ii, 662.
induced (HOFMANN, GONDER, and WÖLFL), A., ii, 71.
of atmospheric precipitations and of surface waters (JAUFMANN), A., ii, 662.

PHOTOCHEMISTRY:—
Radioactivity of underground air (DABOURIAN), A., ii, 132.
of the common metals (RIGHI), A., ii, 431.
of mineral springs (MOUREU), A., ii, 5; (BLANC), A., ii, 221, 786; (MACHE), A., ii, 367; (MACHE and MEYER), A., ii, 498, 787.
of the Wiesbaden thermal springs (HENRICH), A., ii, 6, 221; (SCHMIDT), A., ii, 221; (HENRICH and BUGGE), A., ii, 568.
of deep well and mineral waters (SCHLUNDT and MOORE), A., ii, 368.
of certain fresh-water springs of the Taunus (SCHMIDT), A., ii, 220.
of the boric acid suffioni of Tuscany and the amount of the emanation contained therein (NASINI, ANDERLINI, and LEVI), A., ii, 786.
See also Emanations.
Radiography, electrical (GABRITSCHEWSKI), A., ii, 218.
Rotation of optically active substances (WALDEN), A., ii, 130; (WINTHER), A., ii, 493.
of optically active compounds, influence of solvents on the (PATTERSON and TAYLOR), T., 122; P., 15; (PATTERSON), T., 313; P., 78.
Rotatory power, influence of the ethylenic linking on (MINGUIN), A., i, 321.
of fatty compounds, increase in the, on transformation into cyclic compounds (HALLER and DESFONTAINES), A., ii, 429.
in homologous series, and influence of double linking on (MINGUIN), A., ii, 130.
Mutarotation, phenomena of (JUNGIUS), A., i, 573.
Refractions, molecular, of compounds containing quadrivalent oxygen (HOMFRAY), T., 1443; P., 226.
of some liquid mixtures of constant boiling point (HOMFRAY), T., 1430; P., 225.
specific and molecular, historical survey of the work done in (BRÜHL), A., ii, 781.
Refractive indices of the elements (CUTHBERTSON), A., ii, 129, 293.
Refractive power, relation of, to electrolytic dissociation (ZOPPELLARI), A., ii, 493; (ZECCHINI), A., ii, 661.

PHOTOCHEMISTRY :—
Spectro-chemistry, development of (BRÜHL), A., ii, 781.
Spectra of the fluorides of the alkaline earths in the electric arc (FABRY), A., ii, 217.
of the metals in the electric arc (HASSELBERG), A., ii, 129.
absorption, in relation to colour and chemical structure (HARTLEY), T., 1796, 1822; P., 166, 167.
and chemical constitution of the thiazines and thiazones (FORMÁNEK), A., ii, 217.
ultra-violet absorption, of aromatic compounds (BALY and COLLIE), T., 1332; P., 203; (BALY and EWBANK), T., 1347, 1355; P., 203, 210.
of certain diazo-compounds in relation to their constitution (DOBBIE and TINKLER), T., 273; P., 75.
of organic dyes (KRÜSS), A., ii, 293.
of the purines (DHÉRÉ), A., ii, 783.
of enol-keto-tautomerides (BALY and DESCH), T., 766; P., 84.
emission, of metals in the electric furnace (KING), A., ii, 217.
flame, of metals (DE WATTEVILLE), A., ii, 2.
spark, photographs of (ZOPPELLARI), A., ii, 493.
enhanced lines in (STEINHAUSEN), A., ii, 782.
of metals, influence of very strong electromagnetic fields on the (PURVIS), P., 241.
Photographs and **Photography**. See under Photochemistry.
Phthalaldehydic acid, 5-nitro-, ethyl esters of (WEGSCHEIDER and BONDI), A., i, 896.
Phthalein salts, constitution of (MEYER and SPENGLER), A., i, 440.
Phthalic acid, preparation of, from the oxidation of naphthalene (DITZ), A., i, 516.
β-aminoethyl and γ-aminopropyl hydrogen and methyl esters, and their additive salts (GABRIEL), A., i, 649.
4-amino-, 4-hydroxy-, and 4-nitro-, esterification of (WEGSCHEIDER and BONDI), A., i, 895.
*tetra*chloro-, hydrazine derivatives of (PHELPS), A., i, 528.
*iso***Phthalic acid**, reduction of (PERKIN and PICKLES), T., 293; P., 75; (GOODWIN and PERKIN), T., 841; P., 187.
Phthalic anhydride, action of magnesium organic compounds on (BAUER), A., i, 210.
action of phenylsemicarbazide and semicarbazide hydrochloride on (DUNLAP), A., i, 830.
Phthaliminomalonic acid, ethyl ester, sodium derivative, preparation of, and synthesis of α-amino-acids from (SÖRENSEN), A., i, 600.
Phthalonimide, condensation of, with *o*-phenylenediamine (GABRIEL), A., i, 97.
Phthalophenone (BAUER), A., i, 210.
Phthalylacetoacetic acid, ethyl ester, hydrazones, oxime, and semicarbazones of (BÜLOW and SIEBERT), A., i, 529.
Phthalylacetylacetone (BÜLOW and DESENISS), A., i, 42.
Phthalyl- α- and -β-**alanines** and their ethyl esters (GABRIEL), A., i, 265.
4-Phthalyl-3-methyl-5-*iso*oxazolone (BÜLOW and SIEBERT), A., i, 530.
Phthalylphenylhydrazine, crystallisation of, in two forms (DUNLAP), A., i, 830.
Phthisis, the opsonic index in (MEAKIN and WHEELER), A., ii, 845.
Phylloerythrin, bilipurpurin, and cholehæmatin, identity of (MARCHLEWSKI), A., i, 500, 847.
Physical theories, validity of (DE HEEN), A., ii, 434.
Physiological action and chemical constitution (SCHMIDT), A., i, 23; ii, 105.
of synthetical substances allied to adrenaline (DAKIN), A., ii, 410; (LOEWI and MEYER), A., ii, 846.
Physiological preparations, estimation of water in (BENEDICT and MANNING), A., ii, 349.
Physiological processes, further proof of ionic action in (NEILSON and BROWN), A., ii, 45.
Physodalin and its diacetyl derivative (ZOPF), A., i, 212.
Physostigmine. See Eserine.
Picea excelsa, composition of the proteid from (ABDERHALDEN and TERUUCHI), A., i, 846.
Picolines, α- and γ-. See 2- and 4-Methylpyridines.
Picolinic acid (*pyridine-2-carboxylic acid*) and its methylbetaine, additive salts of, and its ethylbetaine (TURNAU), A., i, 546.
3:4:5-*tri*chloro-, and its methyl ester and amide (SELL), T., 802; P., 165.
2-Picolylalkine. See 2-Ethylpyridine, β-hydroxy-.
2-Picolylmethylalkine. See 2-Propylpyridine, β-hydroxy-.

Picramic acid and its diazotisation (ALOY and FRÉBAULT), A., i, 429.
*iso***Picramic acid**, diazotisation of (REVERDIN and DRESEL), A., i, 430.
acetyl derivative of, and its salts, and its diazotisation (MELDOLA and STEPHENS), T., 1203; P., 218.
Picrates of unsaturated compounds (BRUNI and TORNANI), A., i, 269.
Picric acid, freezing points of mixtures of, with the dihydric phenols (PHILIP and SMITH), T., 1735; P., 255.
solubility of, in water (DOLIŃSKI), A., i, 524.
reaction of, with potassium cyanide (BORSCHE and BÖCKER), A., i, 52.
reactions and detection of (ALOY and FRÉBAULT), A., i, 429.
estimation of, in picric acid additive compounds (SINNATT), P., 297.
Picrolonic acid and its salts with the hexone bases (STEUDEL), A., i, 461.
Picronolates of amines of physiological importance (OTORI), A., i, 126.
s-**Picryl-ψ-cumylhydrazine** (WILLGERODT and HERZOG), A., i, 549.
s-**Picryl-*p*-ethylphenylhydrazine** (WILLGERODT and HARTER), A., i, 552.
s-**Picryl-*p*-xylylhydrazine** (WILLGERODT and LINDENBERG), A., i, 550.
Pig, the gastric mucous membrane and gastric juice of the (BENGEN and HAANE), A., ii, 266.
Pigmentation and intravascular coagulation (MUDGE), A., ii, 539.
Pigments, composition of certain invertebrate (GRIFFITHS), A., i, 293.
of the purple pitcher plant (MEYER and GIES), A., ii, 193.
Pilocarpine and its transformation into a new modification (PINNER), A., i, 658.
constitution of (JOWETT), T., 794; P., 172; (PINNER), A., i, 463.
influence of, on the circulation through the submaxillary gland (HENDERSON and LOEWI), A., ii, 743.
*iso***Pilocarpine**, conversion of, into pilocarpine (JOWETT), T., 794; P., 172.
*iso***Pilocarpinic acid**, *di*bromo-, formula of (PINNER), A., i, 465.
*iso***Pilocarpoic acid** and its esters and additive salts (PINNER), A., i, 463.
Pilosellic acid (ZOPF), A., i, 212.
Pimelic acid, α-amino-, and its copper salt (DIECKMANN), A., i, 418.
Pinacolin, condensation of, with naphthalaldehydic acid (WIECHOWSKI), A., i, 707.
action of potassium hydroxide on a mixture of, with phenylacetylene (NEWEROWITSCH), A., i, 775.
Pinacolin-nitroimine and its salts, alkyl, and *N*-acyl derivatives, and **-oxime** and its acetyl derivative and compound with phenylcarbamide (SCHOLL, WEIL, and HOLDERMANN), A., i, 182.
Pinacone, $C_8H_{30}O_2$, from camphenilone (MOYCHO and ZIENKOWSKI), A., i, 712.
Pinacones, action of dilute acids on (LIEBEN; KOHN), A., i, 167.
Pinacone-pinacolin rearrangement (MONTAGNE), A., i, 58, 445, 524; (ACREE), A., i, 216.
Pine-wood oils, detection of (VALENTA), A., ii, 657.
Pinene bromide, solid, action of silver acetate on (GODLEWSKY), A., i, 654.
nitrosochloride, action of magnesium methyl iodide on (TILDEN and STOKES), T., 836; P., 183.
*iso*nitrosocyanide and its derivatives (TILDEN and BURROWS), T., 344; P., 94.
Pinus longifolia, resin oil of (RABAK), A., i, 911.
2-β-2′-Pipecolylethylpyridine and its additive salts (LÖFFLER and KIRSCHNER), A., i, 938.
Piperazine, action of hypobromous acid on (CHATTAWAY and LEWIS), T., 951; P., 183.
derivatives from methylchloroethylamine and chloroethylpiperidine (KNORR, HÖRLEIN, and ROTH), A., i, 834.
glycerophosphates (ASTRUC), A., i, 382.
methylarsonate (ASTRUC), A., i, 671.
Piperidine, influence of temperature on the action of acetyl thiocyanate on (DORAN and DIXON), T., 339; P., 77.
Piperidine series, pharmacological studies on synthetical bases of the (HILDEBRANDT), A., i, 80, 153.
Piperidoethyl ether and its additive salts (KNORR, HÖRLEIN, and ROTH), A., i, 821.
2-Piperidone-6-carboxylic acid and its salts (DIECKMANN), A., i, 417.
Piperidylcadaverine, benzoyl derivative (v. BRAUN and STEINDORFF), A., i, 206.
α-Piperidyl-β-*aci*-*di*nitroethane and its acetyl derivative (DUDEN, BOCK, and REID), A., i, 568.
α-Piperidyl-β-*iso*nitrosoethyl phenyl ketone (DUDEN, BOCK, and REID), A., i, 569.
Piperildisemicarbazone (BILTZ and ARND), A., i, 675.
Piperonalacetophenone dipicrate (VORLÄNDER and SIEBERT), A., i, 793.

Piperonaldehyde, action of magnesium ethyl iodide on (MAMELI), A., i, 203.
action of magnesium propyl iodide on (MAMELI and ALAGNA), A., i, 889.
action of nitrogen sulphide on (DAVIS), T., 1834; P., 258.
mono- and di-hydrochlorides and monohydrobromide (VORLÄNDER and SIEBERT), A., i, 792.
Piperonalindigo, by-products from the preparation of, and its oxidation (HERZ), A., i, 778.
Piperonyl alcohol and chloride (DECKER and KOCH), A., i, 473.
chloride (PERKIN and ROBINSON), P., 287.
dibromide, Mameli's composition of (BARGER and JOWETT), T., 973; P., 206.
Piperonylacetic acid, ethyl ester, and its copper derivative (PERKIN and ROBINSON), P., 287.
Piperonylacetoacetic acid, ethyl ester, and its sodium and copper derivatives (PERKIN and ROBINSON), P., 287.
Piperonylacetone and its oxime (HOERING), A., i, 903.
Piperonylacryl methyl ketone, *o*-nitro-, and its oxime (HERZ), A., i, 779.
α-Piperonyl-Δ$^{\alpha}$-butylene and **-butane** and its αβ-dibromo-derivative (MAMELI and ALAGNA), A., i, 890.
***N*-Piperonyleneanthranilic acid** (v. PAWLEWSKI), A., i, 438.
Piperonylhydracryl methyl ketone, *o*-nitro-, and its oxime and phenylhydrazone (HERZ), A., i, 778.
β-Piperonylideneacetamide, bromo-α-cyano- (PICCININI), A., i, 599.
Piperonylidenenitroethane (KNOEVENAGEL and WALTER), A., i, 66.
Piperonylidene-phenylbenzylhydrazine and **-semicarbazide** (OTT), A., i, 376.
Piperonylidenepinacolin (VORLÄNDER and SIEBERT), A., i, 793.
Piperonylidenetetrazoline (RUHEMANN and MERRIMAN), T., 1776.
Piperonylidene-thujone and **-*iso*thujone** (HALLER), A., i, 603.
Piperonylpropylcarbinol and its acetyl derivative (MAMELI and ALAGNA), A., i, 889.
Piperonyl propyl ketone and its oxime and semicarbazone (MAMELI and ALAGNA), A., i, 890.
Piperylhydrazine (ANGELI and CASTELLANA), A., i, 491.
Piperyltetrazone (ANGELI and CASTELLANA), A., i, 491.
Pipettes, new automatic (GREINER and FRIEDRICHS), A., ii, 349.
Pisum sativum, effect of carbon dioxide on geotropic curvature of the roots of (DRABBLE and LAKE), A., ii, 751.
Pitchblende, state in which helium exists in (MOSS), A., ii, 520.
Pitcher plant, purple, pigments of the (MEYER and GIES), A., ii, 193.
Placodiolic acid (ZOPF), A., i, 790.
Plague, blood changes in (ROGERS), A., ii, 338.
Plant ash, estimation of alumina in (PELLET and FRIBOURG), A., ii, 861.
estimation of titanic acid in (PELLET and FRIBOURG), A., ii, 862.
Plant food, different degrees of availability of (LOEW and ASŌ), A., ii, 347.
available, in soils (INGLE), T., 43.
ammoniacal nitrogen as (GERLACH and VOGEL), A., ii, 346.
Plant growth, can aluminium salts enhance? (YAMANO; SMITH), A., ii, 344.
effect of ether, carbon disulphide, chloroform, benzene, and hydrogen peroxide in the soil on (NOBBE and RICHTER), A., ii, 53.
influence of different amounts of soil on (LEMMERMANN), A., ii, 413.
effect of soil sterilisation on (SCHULZE), A., ii, 54.
Plant roots. See Roots.
Plants, assimilation of carbon by (PLANCHER and RAVENNA), A., ii, 191.
different origin of the carbon dioxide given off by plants during respiration (PALLADIN), A., ii, 751.
decomposition of carbon dioxide by (BERNARD), A., ii, 275.
chlorophyllous assimilation in young shoots of (GRIFFON), A., ii, 475.
chlorosis of (DOMENTÉEFF), A., ii, 476.
heliotropism indirectly caused by radium in (MOLISCH), A., ii, 412.
and vegetable tissues, desiccation of; period of maturation not reversible; final equilibrium in average atmospheric conditions (BERTHELOT), A., ii, 50, 413.
absolute desiccation of; period of artificial desiccation; reversibility by atmospheric moisture (BERTHELOT), A., ii, 51, 413.
desiccation of; period of vitality; humectation by liquid water; reversibility imperfect (BERTHELOT), A., ii, 51, 413.
successive distributions of estragole and terpenic compounds among the different organs of an annual (CHARABOT and LALOUE, A., ii, 549.

Plants, consumption of odoriferous substances in etiolated (CHARABOT and HÉBERT), A., ii, 276.
iminazole ring formation in (KNOOP and WINDAUS), A., i, 510.
origin of alkaloids in (PICTET), A., i, 541.
occurrence of alumina in (PELLET and FRIBOURG), A., ii, 861.
composition of solid fats of (KLIMONT), A., ii, 475.
lactolase, an enzyme which causes the formation of lactic acid in (STOKLASA), A., ii, 192.
organic compounds of metals in (SCHLAGDENHAUFFEN and REEB), A., ii, 51.
non-proteid nitrogenous constituents of agricultural (SCHULZE), A., ii, 52.
consumption of water by (v. SEELHORST and MÜTHER), A., ii, 606.
analysis of, as an aid in estimating the manurial requirements (SCHNEIDER), A., ii, 755.
mutual action of salts in the mineral nutrition of (KOSSOWITSCH), A., ii, 548.
effects of ammonium salts on the assimilation of phosphoric acid by higher (PRIANISCHNIKOFF), A., ii, 413.
importance of calcium and magnesium salts for (GÖSSEL), A., ii, 51.
lime requirements of (LOEW), A., ii, 751.
leucine and tyrosine as sources of nitrogen for (LUTZ), A., ii, 276.
poisonous action of sodium fluoride on (LOEW), A., ii, 606.
measure for the action of poisons on (VERSCHAFFELT), A., ii, 853.
insensibility of higher, towards their own poisons (STRACKE), A., ii, 853.
green, nutrition of, with nitrogen (TREBOUX), A., ii, 276.
development of, in light, in absence of carbon dioxide, in an artificial soil containing amides (LEFÈVRE), A., ii, 648.
culture of, in a confined atmosphere in presence of organic matters MOLLIARD), A., ii, 750.
medicinal and useful, of Brazil (PECKOLT), A., ii, 113.
oleaginous, simultaneous variations of, in some (ANDRÉ), A., ii, 605.
estimation of potassium in (VEITCH), A., ii, 204.
Plasteins, peptic digestion products of (GROSSMANN), A., ii, 99.
Plasteins, relationship of the peptic digestion products of, to liver muscles and other organs (GROSSMANN), A., ii, 838.
Platinates. See under Platinum.
Platinum, occurrence of, in Brazil (HUSSAK), A., ii, 598.
ultra-violet spark spectrum of (ADENEY), A., ii, 493.
electrolytic solution of (BROCHET and PETIT), A., ii, 27, 28, 260, 261, 672, 673; (RUER), A., ii, 137, 795.
temperature-coefficient of the resistance of (STREINTZ), A., ii, 432.
melting point of (HARKER), A., ii, 798.
volatilisation of (HULETT and BERGER), A., ii, 42.
absorption of oxygen by (LUCAS), A., ii, 396.
action of hydrochloric acid on (BERTHELOT), A., ii, 3.
hydrosol (GUTBIER and HOFMEIER), A., ii, 396.
Platinum compounds (BELLUCCI and PARRAVANO), A., ii, 395; (BLONDEL), A., ii, 720; (BELLUCCI), A., ii, 832.
Hexahydroxyplatinic acid (BELLUCCI), A., ii, 327.
Platinates, plumbates, and stannates, isomorphism of (BELLUCCI and PARRAVANO), A., ii, 395.
Platinum phosphorus halogen organic compounds and their derivatives (ROSENHEIM and LEVY), A., i, 183.
Platinocyanides, some new (LEVY and SISSON), P., 305.
Platinum, estimation of, by means of magnesium (FAKTOR), A., ii, 485.
estimation of, in platinoso-oxalates (BLONDEL), A., ii, 722.
and iridium, separation of (QUENNESSEN), A., ii, 615.
Platinum black, influence of, on the hydrolysis of sucrose (VONDRÁČEK), A., ii, 151.
Platinum series, colloidal metals of the (GUTBIER and HOFMEIER), A., ii, 396, 533; (PAAL and AMBERGER), A., ii, 397.
Plumbates. See under Lead.
Poison, arrow, of the Lukarets (SAPIN), A., ii, 413.
Munchi (FRÖHLICH), A., ii, 411.
snake (*venoms*), influence of radium emanations on the toxicity of (PHISALIX), A., ii, 339.
plurality of cytolysins in (FLEXNER and NOGUCHI), A., ii, 107.
fibrin ferments in (MARTIN), A., ii, 411.

Poison, snake (*venoms*), and snake sera, precipitins for (HUNTER), A., ii, 539.
spear, of the Cameroons (BRIEGER and KRAUSE), A., ii, 411.
Poisons, action of, on the isolated small intestine of dogs and rabbits (KRESS), A., ii, 847.
applied to the outer surface of the mammalian heart (BALDONI), A., ii, 338.
Poisoning, detection of morphine in cases of (BETTINK), A., ii, 546.
by acetonitrile, influence of thyroid feeding on (HUNT), A., ii, 847.
by arsenic, localisation of arsenic in (DENIGÈS), A., ii, 745.
by mercury, aluminium as a preventive of (TARUGI), A., ii, 205.
by phosphorus, chemical changes in the liver during (WAKEMAN; MEINERTZ), A., ii, 470.
the urine in (WOHLGEMUTH), A., ii, 339, 470.
the transport of iodised fat in (WELLS), A., ii, 745.
Polarisation. See Electrochemistry.
Polonium and radiotellurium (MARCKWALD), A., ii, 623.
deflection of α-rays from (MACKENZIE), A., ii, 790.
Polymerisation in the liquid and solid states (LONGINESCU), A., ii, 79.
Polymethyleneimines, new, preparation of, by Ladenburg's method (KONOWALOFF and WOINITSCH-SIANOSCHENSKY), A., i, 826.
Polymorphic substances, transformation of (STEINMETZ), A., ii, 685.
Polypeptides, synthesis of (FISCHER and SUZUKI), A., i, 30; (FISCHER and KOENIGS), A., i, 31; (FISCHER and REUTER), A., i, 263; (FISCHER and KAUTZSCH), A., i, 637; (FISCHER), A., i, 688, 863; (FISCHER and AXHAUSEN), A., i, 688; (FISCHER and BRUNNER), A., i, 690; (FISCHER and WARBURG), A., i, 690, 692; (FISCHER and KOELKER), A., i, 692; (FISCHER and RASKE), A., i, 693; (FISCHER and SCHMIDLIN), A., i, 694.
of the diamino-acids (FISCHER and SUZUKI), A., i, 121.
behaviour of various, towards the pancreas ferment (FISCHER and ABDERHALDEN), A., ii, 333.
See also Amino-acids.
Polysulphides. See under Sulphur.
Polythionic acids. See under Sulphur.
Portland cement. See Cement.
Position isomerism, relation of, to optical activity (COHEN and ARMES), T., 1190; P., 218; (COHEN and ZORTMAN), P., 306.
Potable water. See under Water.
Potash apparatus, quick-acting (SCHÖLER), A., ii, 481.
Potassammonium, action of, on barium bromide (JOANNIS), A., ii, 450.
Potassium, specific heat and latent heat of fusion of (BERNINI), A., ii, 802.
migration of, and the injury current (MACDONALD), A., ii, 545.
distribution and detection of, in animal and vegetable cells (MACALLUM), A., ii, 270.
Potassium salts, isomorphism of, with thallous salts (STORTENBEKER), A., ii, 390.
action of, on the circulatory organs (HOLD), A., ii, 836.
crude and pure, with calcium as manure (SCHNEIDEWIND and RINGLEBEN), A., ii, 197.
Potassium *di-per*borate (BRUHAT and DUBOIS), A., ii, 246.
bromide, the anodic potential in the electrolysis of neutral solutions of (BOERICKE), A., ii, 222.
solubility of bromine in (WORLEY), T., 1107; P., 209.
chloride, and iodide, solubility of, in water (MEUSSER), A., ii, 317.
as indicator, when using Fehling's solution (BERTI), A., ii, 57.
carbonate, causticising of (BODLÄNDER and LUCAS), A., ii, 634.
*per*carbonate (BROWN), A., ii, 818.
chlorate, action of hydrochloric acid on (KOLB and DAVIDSON), A., ii, 59; (DAVIDSON), A., ii, 584; (DITZ), A., ii, 760.
transformation of, into iodate by iodine in presence of nitric acid (SCHLÖTTER), A., ii, 520.
chloride and iodide, electrical conductivity of, in acetamide (WALKER and JOHNSON), T., 1599; P., 233.
chromates (SCHREINEMAKERS), A., ii, 818.
hydroxide, the Castner mercury process of obtaining (LE BLANC and CANTONI), A., ii, 696.
iodate and iodic acid, solubility of, at 30° (MEERBURG), A., ii, 17.
iodide, reaction of, with arsenic acid near the equilibrium (BRAY), A., ii, 690.
mercuric iodide (DUBOIN), A., ii, 637.
*per*manganate, kinetics of the reaction between oxalic acid and (SKRABAL), A., ii, 17.

Potassium *per*manganate, interaction of, with hydrochloric acid in presence of ferric chloride (BROWN), A., ii, 166.
action of, on hydroxylamine salts (SIMON), A., ii, 242.
solutions, standardisation of, by means of silver (HOPFGARTNER), A., ii, 484.
estimation of, in presence of potassium persulphate (FRIEND), T., 738; P., 133.
nitrate and sodium nitrate, electrical conductivity of, and of fused mixtures of the two nitrates together and with other salts (BOGORODSKY), A., ii, 669.
electrolysis of fused (BOGORODSKY), A., ii, 705.
and sulphate, magnetisation coefficient of (MESLIN), A., ii, 228.
and thallium nitrate, equilibrium between (VAN EIJK), A., ii, 444.
polymorphism of (WALLERANT), A., ii, 161.
assay of (BENSEMANN), A., ii, 481, 555.
estimation of chlorates and perchlorates in (TSCHERNOBÉEFF), A., ii, 416.
estimation of, in meats and flesh products (STÜBER), A., ii, 765.
nitrite and its decomposition by heat (RÂY), T., 178.
bismuth nitrite (BALL), T., 762; P., 130.
iridochloronitrite (QUENNESSEN), A., ii, 640.
chromic selenide (MILBAUER), A., ii, 95.
zinc silicates (DUBOIN), A., ii, 634.
sulphate, triboluminescence of (GERNEZ), A., ii, 430.
causticising (HEROLD), A., ii, 584.
pentacalcium sulphate, temperature of formation of (VAN'T HOFF, VOERMAN, and BLASDALE), A., ii, 319.
lead sulphate, existence of a definite (BELTON), A., ii, 457.
uranyl sulphates, double (OECHSNER DE CONINCK and CHAUVENET), A., ii, 394.
hypovanadovanadate (PRANDTL), A., ii, 170.

Potassium organic compounds:—
cyanide, electrical conductivity of, in acetamide (WALKER and JOHNSON), T., 1599; P., 233.
solution, action of, on various metals (BROCHET and PETIT), A., ii, 27, 261.
Potassium organic compounds:—
cyanide, action of, on metallic electrodes (BROCHET and PETIT), A., ii, 27, 261.
action of, on potassium *m*-nitrobenzenesulphonate (HOLLEMAN), A., i, 595.
molybdenum cyanide and thiocyanate (CHILESOTTI), A., i, 177.
ferricyanide, reaction of, with aromatic polyamines (BARSILOWSKY), A., i, 549.
action of ammonium chloride on (MATUSCHEK), A., i, 422.
ferrocyanide, influence of the nature of the anode on the electrolytic oxidation of (BROCHET and PETIT), A., i, 38.
thiocyanate, action of, on metallic oxides at high temperatures (MILBAUER), A., i, 121.
palladothiocyanate (BELLUCCI), A., i, 122.
xanthate and potassium methyl and ethyl xanthates, action of, on monohalogen substituted fatty acids (HOLMBERG), A., i, 323.
Potassium estimation:—
new reagent for (ALVAREZ), A., ii, 355.
estimation of (KLINKERFUES), A., ii, 204, 859; (SCHULTZE), A., ii, 482.
estimation of, in soils, plants, and fertilisers (VEITCH), A., ii, 204.
Potatoes, action of sodium chloride on (WOHLTMANN), A., ii, 759.
injurious action of crude potassium salts on (SÜCHTING), A., ii, 277.
Praseodymium, purification of (BASKERVILLE), A., ii, 458.
Precipitates, formation of, in jellies (BECHHOLD), A., ii, 513.
handling of, for solution and reprecipitation (GOOCH), A., ii, 608.
automatic apparatus for washing (ANGELUCCI), A., ii, 694.
Precipitin immunity, pilocarpine and other reagents in relation to (INCHLEY), A., ii, 601.
Precipitins (BANG), A., i, 956.
and anti-precipitins (BERMBACH), A., ii, 407, 730.
specificity of (HUNTER), A., ii, 539.
for snake venoms and snake sera (HUNTER), A., ii, 539.
Prehnite from Lower California (SCHALLER), A., ii, 724.
Prolines, hydroxy-. See Pyrrolidine-2-carboxylic acids, 4-hydroxy-.
Propaldehyde, α- and β-bromo- and α-iodo-, and the hydrate of the β-bromo- (NEF), A., i, 6.

Propaldehydeacetal, β-bromo- (NEF), A., i, 6.
Propane, physical properties of (LEBEAU), A., i, 501.
Propane, *di*amino-. See Propylenediamine.
*s-tri*bromo-, preparation of (PERKIN and SIMONSEN), T., 856; P., 188.
*penta*chloro- and γγγ-*tri*chloro-αβ-*di*bromo- (VITORIA), A., i, 110.
*di*hydroxy-. See Propylene glycol.
α-*aci-di*nitro-β-amino-, potassium salt (DUDEN, BOCK, and REID), A., i, 568.
*cyclo***Propane,** amino-, and its additive salts and acyl derivatives (KIJNER), A., i, 517.
*cyclo***Propanecarboxylic acid** and its anilide and *p*-bromoanilide (AUTENRIETH and PRETZELL), A., i, 629.
Propanedicarboxylic acids. See Ethylmalonic acid, Glutaric acid, and Methylsuccinic acid.
*cyclo***Propanedicarboxylic acid,** formation of, from glutaric acid (PERKIN and TATTERSALL), T., 362; P., 90.
*cyclo***Propanedicarboxylic acids,** *cis-* and *trans-* (PERKIN), T., 359; P., 90.
*cyclo***Propane-1:2-dicarboxylic acid,** α- and β-*di*bromo- (BUCHNER and WEDEMANN), A., i, 439.
*cyclo***Propane-1:2-di-** and **-1:1:2-tri-carboxylic acids,** *d-* and *l-*, and their alkaloidal salts (BUCHNER and VON DER HEIDE), A., i, 780.
Propane-αα-disulphonic acid, barium salt (SCHROETER and HERZBERG), A., i, 851.
Propanetetracarboxylic acid, *di*bromo-, ethyl ester, action of, on the disodium derivative of ethyl propanetetracarboxylate (PERKIN), T., 358; P., 90.
Propane-αββγ-tetracarboxylic acid, αγ-*di*cyano-, ethyl ester, and the action of ammonia on (SCHMITT), A., i, 508.
*cyclo***Propanetetracarboxylic acid** and its ethyl ester (PERKIN), T., 359; P., 90.
Propane-ααγ-tricarboxylic acid, αγ-*di*hydroxy-, and its salts and lactone (KILIANI and HEROLD), A., i, 739.
Propane-αβγ-tricarboxylic acid. See Tricarballylic acid.
Δ$^{\beta}$-Propene-γ-ol-α-al, β-chloro- (*chloromalonaldehyde*) and its alkali derivatives and benzoate (DIECKMANN and PLATZ), A., i, 117, 171.
Propenyl compounds, aromatic, dibromides of (HOERING), A., i, 902, 903.
Propenylanisoles. See Anetholes.
*iso***Propenylbenzene** (MATSUBARA and PERKIN), T., 672.
p-**Propenylphenetole** (VERLEY), A., i, 127.
Propionacetalylmalonic acid, ethyl ester (ELLINGER), A., i, 827.
Propionepinacone, action of dilute sulphuric acid on (KOHN), A., i, 167.
Propionic acid, action of nitrogen sulphide on (FRANCIS), T., 1837; P., 258.
amino-. See Alanines.
*di*amino-, methyl ester, and its dipeptide (FISCHER and SUZUKI), A., i, 121.
α-amino-β-hydroxy-. See Serine.
β-amino-α-hydroxy-. See *iso*Serine.
α-bromo-, optically active, and its chloride (FISCHER and WARBURG), A., i, 692.
α-hydroxy-. See Lactic acid.
Propionylbutyryl and its dioxime (LOCQUIN), A., i, 20.
Propionylbutyryloxime (LOCQUIN), A., i, 19.
Propionylcarbinol and its esters, oxime, and semicarbazone (KLING), A., i, 503.
Propionylhexoyl (LOCQUIN), A., i, 20.
Propionylhexoyloximes (LOCQUIN), A., i, 20.
Propionylhydrazide, *di*cyano- (RINMAN), A., i, 389.
Propionyl*iso***valeryl** (LOCQUIN), A., i, 20.
Propionyl*iso***valeryloximes** (LOCQUIN), A., i, 19.
Propiophenone-*o***-carboxylic acid** and its reactions (DAUBE), A., i, 210.
Propiophenoneoxime-*o***-carboxylic acid,** anhydride of (DAUBE), A., i, 210.
Propoxy*tetra***chloroethane** (VITORIA), A., i, 111.
β-**Propoxy-αα-***di***chloropropylene** (VITORIA), A., i, 110.
n-**Propyl alcohol,** behaviour of solutions of, towards semi-permeable membranes (FINDLAY and SHORT), T., 819; P., 170.
and benzene and *n*-propyl alcohol and water, viscosity of (DUNSTAN), T., 12.
chlorination of (ODDO and CUSMANO), A., i, 402.
α-amino-, derivatives of (GABRIEL), A., i, 649.
*iso***Propyl alcohol,** ααα-*tri*chloro-, action of phosphorus chlorides on, and its bromide and chloride (HENRY), A., i, 558.
γγγ-*tri*chloro-, and its acetate (VITORIA), A., i, 110.
*aci-di*nitro-, and its potassium salt (DUDEN and PONNDORF), A., i, 558.

n-**Propyl iodochloride** (THIELE and PETER), A., i, 736.
Propyl oxide, *di*hydroxy- (NEF), A., i, 5.
Propyl sulphite and its sodium salt (ROSENHEIM and SAROW), A., i, 404.
*iso***Propylacetaldehyde.** See *iso*Valeraldehyde.
*iso***Propylacetoacetaldehyde** and its copper salt (COUTURIER and VIGNON), A., i, 571.
n-**Propylacetoacetamide** (GUARESCHI), A., i, 822.
α-**Propylacrylic acid** and its ester and potassium salt (BLAISE and LUTTRINGER), A., i, 628.
α-*iso***Propylacrylic acid** and its ethyl ester and dibromide (BLAISE and LUTTRINGER), A., i, 628.
Propyl acyl-δ-aminobutyl ketones and their oximes and semicarbazones (v. BRAUN and STEINDORFF), A., i, 812.
α-*iso***Propyladipic acid** (BLANC), A., i, 683.
Propyl amyl ketone and its semicarbazone (BOUVEAULT and LOCQUIN), A., i, 18.
*iso***Propylanhydroacetonebenzils,** α- and β- (JAPP and KNOX), T., 673; P., 152.
o-**Propylaniline,** β-chloro-, and its *N*-benzoyl derivative (v. BRAUN and STEINDORFF), A., i, 81, 156.
γ-chloro-, and its salts (v. BRAUN and STEINDORFF), A., i, 294.
N-naphthoyl derivative of (v. BRAUN), A., i, 236.
5-**Propylbarbituric acid** (5-*propylmalonylcarbamide*), 4-imino- (CONRAD), A., i, 751.
Propyl *iso***butyl ketone,** semicarbazone of (BOUVEAULT and LOCQUIN), A., i, 18.
O-**Propyl***iso***carbamide** and its hydrochloride (STIEGLITZ and NOBLE), A., i, 639.
p-*iso***Propyldimethylaniline** and its additive salts (F. and L. SACHS), A., i, 190, 274.
Propylene, *aaa-tri*chloro- (VITORIA), A., i, 110; (HENRY), A., i, 559.
n-**Propylene glycol,** sodium derivatives of (PARONE), A., i, 731.
Propylenediamine, dibenzoyl derivative (WINDAUS and KNOOP), A., i, 381.
Propylenedicarboxylic acid. See Glutaconic acid.
β-**Propylene***cyclo***propane** (*dimethylmethylenetrimethylene*), (ALEXÉEFF), A., i, 639.
*iso***Propylformal,** *s-tetra*chloro-, crystals of (STAPPERS), A., i, 261; (CESÁRO), A., i, 570; (HENRY), A., i, 634.
*hexa*chloro- (HENRY), A., i, 559.
Propylformals, *n*- and *iso*-, chloro-derivatives (STAPPERS), A., i, 261.
β-*iso***Propylglutaric acid** (NOYES and DOUGHTY), A., i, 321.
*iso***Propylglutaric acids,** α- and β- (BLANC), A., i, 682.
*iso***Propylhexamethylene.** See Normenthane.
α-**Propylhydracrylic acids,** *n*- and *iso*-, and their salts, ethyl ester, phenylhydrazide, and phenylurethane (BLAISE and LUTTRINGER), A., i, 505.
*iso***Propylideneacetone.** See Mesityl oxide.
β-*iso***Propylideneanhydroacetonebenzil** and its acetyl derivative (JAPP and KNOX), T., 673; P., 152.
Propylidenediacetamide (REICH), A., i, 35.
Propylmalonamide (CONRAD and ZART), A., i, 754.
Propylmalonic acid, γδ-*di*hydroxy- (TRAUBE), A., i, 13.
d-1-*iso***Propyl-3-γ-methyl-amyl- and -Δ$^{\alpha}$-pentenyl-benzenes** (KLAGES and SAUTTER), A., i, 579.
o-**Propylphenol,** γ-chloro-, and its phenylcarbamate (v. BRAUN and STEINDORFF), A., i, 294.
p-*iso***Propylphenylpyruvic acid** and its sodium salt, and condensation with benzaldehyde (ERLENMEYER and MATTER), A., i, 238.
Propylphthalamic acid, γ-bromo- (GABRIEL), A., i, 649.
Propylphthalimide, β-bromo-, nitrosoamine from (GABRIEL), A., i, 651.
γ-chloro- (GABRIEL), A., i, 650.
γ-nitro- (GABRIEL), A., i, 441.
Propylphthaliminomalonic acid, γ-bromo-, ethyl ester (SÖRENSEN), A., i, 749.
α-*iso***Propylpropionic acid,** *di*bromo-. See β-Methyl-α-bromomethylbutyric acid, bromo-.
1-**Propylpyridine,** β-bromo-, and its additive salts, and their transformation products (LÖFFLER and KIRSCHNER), A., i, 938.
2-**Propylpyridine,** β-amino-, and its additive salts (LÖFFLER and KIRSCHNER), A., i, 939.
β-hydroxy-, derivatives of (LÖFFLER and KIRSCHNER), A., i, 938.
4-**Propylpyridine,** ω-*tri*chloro-β-hydroxy-, and its platinichloride (DÜRING), A., i, 233.
ψ-**Propylthiocarbamide** hydrobromide (WHEELER and BRISTOL), A., i, 482.
Propylthujone and its semicarbazone (HALLER), A., i, 602.

α-Propylvaleramide, α-bromo- (KALLE & Co.), A., i, 639.
cyano- (CONRAD and ZART), A., i, 754.
α-Propylvaleric acid, α-cyano-, ethyl ester (CONRAD), A., i, 752.
α-Propylvaleryl chloride, α-bromo- (KALLE & Co.), A., i, 639.
α-Propylvalerylcarbamide, α-cyano- (MERCK), A., i, 178; (CONRAD and ZART), A., i, 754.
Protagon (POSNER and GIES), A., i, 252; (BARBIERI), A., i, 621.
Protamines, further researches on (KOSSEL and DAKIN), A., i, 620.
formation of, in the organism (KOSSEL), A., ii, 467.
Proteid, physical units of, and the part played by lime in their coagulation (MALFITANO), A., i, 846.
production of fat from, by *Bacillus pyocyaneus* (BEEBE and BUXTON), A., ii, 108.
formation of sugar from (LÜTHJE), A., ii, 99.
gelatin as a substitute for, in food (MURLIN), A., ii, 180.
of *Aspergillus niger*, composition of (ABDERHALDEN and RONA), A., i, 954.
Bence-Jones (ABDERHALDEN and ROSTOCKI), A., i, 954.
in urine (LINDEMANN), A., ii, 186.
liver, hydrolysis of (WOHLGEMUTH), A., i, 103, 620.
from *Picea excelsa*, composition of (ABDERHALDEN and TERUUCHI), A., i, 846.
Proteid decomposition in extreme hunger (BRUGSCH), A., ii, 404.
products, nutritive value of (CRONHEIM), A., ii, 99.
Proteid diet, sulphur and phosphorus metabolism on an abundant (BORNSTEIN), A., ii, 99.
Proteid katabolism (COHNHEIM), A., ii, 839.
Proteid metabolism, a theory of (FOLIN), A., ii, 268; (NOËL PATON), A., ii, 734.
influence of different proteids, asparagine, and lecithin on (VÖLTZ), A., ii, 403.
Proteid solutions, action of colloids on (BILTZ, MUCH, and SIEBERT), A., i, 495.
Proteid synthesis in the body (HENRIQUES and HANSEN), A., ii, 180.
and proteolysis in the organism (ABDERHALDEN), A., ii, 334; (ABDERHALDEN and RONA), A., ii, 467.
Proteids, crystallised, preparation of (COHN), A., i, 103.
complex, formation of, from peptones (SPIEGEL), A., i, 954.
formation of, in ripening seeds (ZALESKI), A., ii, 549.
the carbohydrate group in (LANGSTEIN), A., i, 496.
state of combination of sulphur in (RAIKOW), A., i, 725.
equilibrium between electrolytes and (GALEOTTI), A., ii, 512.
hydrolysis of (SKRAUP), A., i, 398, 619; (ABDERHALDEN), A., i, 496.
oxidation of (OTORI), A., i, 104; (PLIMMER), A., i, 162; (KUTSCHER and SCHENCK), A., i, 251; (SEEMANN), A., i, 619.
action of chloroform on (EDIE), A., i, 397.
protective action of salt on solutions of (BILTZ), A., i, 251.
assimilation of, in animals (ABDERHALDEN and SAMUELY), A., ii, 840.
utilisation of, without the intervention of digestion (MENDEL and ROCKWOOD), A., ii, 45.
importance of the digestion of, for their assimilation (ABDERHALDEN), A., ii, 334.
digestion of, in the alimentary tract (LONDON and SULIMA), A., ii, 838.
digestion of, in the stomach (TOBLER), A., ii, 642.
gastric digestion of (LEO), A., ii, 838.
peptic and tryptic digestion of (LAWROFF), A., ii, 178.
of blood (MORAWITZ), A., ii, 837.
of castor oil beans (WINTERSTEIN), A., i, 727; (OSBORNE, MENDEL, and HARRIS), A., i, 753.
of lupin seeds, amino-acids from the hydrolysis of (WINTERSTEIN and PANTANELLI), A., i, 687.
of wheat (OSBORNE and HARRIS), A., ii, 194.
colour reactions of, with aromatic aldehydes (ROHDE), A., i, 618.
precipitation limits with ammonium sulphate of some vegetable (OSBORNE and HARRIS), A., i, 555.
estimation of, in milk (LOHNSTEIN), A., ii, 773.
separation of (HASLAM), A., i, 495.
Protein-cystine. See under Cystine.
Proteolysis and proteid synthesis in the organism (ABDERHALDEN), A., ii, 334; (ABDERHALDEN and RONA), A., ii, 467.
Proto-albumose, hydrolytic cleavage of (LEVENE), A., i, 252.

Protocatechualdehyde (SOMMER), A., i, 141.
Protocatechuic acid, methyl ethers of (GRAEBE and MARTZ), A., i, 702.
Protocatechuic anilide, formation of (SCHIFF), A., i, 45.
Proto-α-lichesteric acid and its barium salt (HESSE), A., i, 138.
Protoic acids, *di*amino- (v. FÜRTH), A., i, 498.
Protoplasm, differences in staining reaction of living and dead (RŮŽIČKA), A., ii, 405.
Prune and its derivatives (GNEHM and BAUER), A., i, 832.
Prunus Laurocerasus, cyanogenetic glucoside of the leaves of (JOUCK), A., i, 912.
Prunus Padus, cyanogenetic glucoside of (JOUCK), A., i, 912.
Prussian blue, soluble, identity of, with soluble Turnbull's blue, and formula of (HOFMANN, HEINE, and HÖCHTLEN), A., i, 38; (HOFMANN and RESENSCHECK), A., i, 757.
Pseudo-acids and acids, suggested nomenclature of (HANTZSCH), A., i, 317.
Pseudo-bases and bases, suggested nomenclature of (HANTZSCH), A., i, 317.
preparation of compounds from, by the replacement of the hydroxyl group by hydrocarbon residues (FREUND and SPEYER), A., i, 156.
Pseudo-lipæmia (FAWCETT and BOYCOTT), A., ii, 49.
Pseudomucin, decomposition of, by concentrated boiling acids (OTORI), A., i, 104.
oxidation of, with calcium permanganate (OTORI), A., i, 104.
Psidium Guajava leaves (ALTAN), A., ii, 192.
Pulego-menthols and their hydrogen phthalates and **-menthones** (HALLER and MARTINE), A., i, 533.
Pulegone, catalytic reduction of, with metallic nickel (HALLER and MARTINE), A., i, 533.
dioxime (SEMMLER), A., i, 222.
Purification, centrifugal, efficiency of (RICHARDS), A., ii, 238.
Purine, endogenous, source of, in man and mammals (BURIÁN), A., ii, 271.
2:6-*di*amino-. See Adenine, 2-amino-.
Purine bases, ultra-violet absorption spectra of the (DHÉRÉ), A., ii, 783.
absorption spectra of, in relation to colour and chemical structure (HARTLEY), T., 1802; P., 166.
Purine bases, amounts and origin of, in human fæces (KRÜGER and SCHITTENHELM), A., ii, 645.
estimation of, in human urine (KRÜGER and SCHMID), A., ii, 776.
Purine group, chemical constitution and diuretic action in the (BERGELL and RICHTER), A., ii, 744.
Purpuric acids, aromatic, constitution of (BORSCHE and BÖCKER), A., i, 51; (BORSCHE and GAHRTZ), A., i, 894.
Purpurinsulphonic acid, new (BADISCHE ANILIN- & SODA-FABRIK), A., i, 146.
Purpurin-α-(6- or 9-)sulphonic acid and its alkali salts (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 146.
Purpurite from the Faires tin mine, Gaston Co., N. Carolina (GRATON and SCHALLER), A., ii, 724.
Purpurogallin, methylation of (PERKIN), P., 211.
*iso***Purpurogallone** and its anhydride and tetramethyl ether (PERKIN), P., 211.
Putrescine. See Tetramethylenediamine.
Pyknometer, new form of (STANFORD), A., ii, 631.
modified Gintl (RAKUSIN), A., ii, 802.
capillary (ERBEN), A., ii, 741.
for small quantities of solid substances (JACOBSEN), A., ii, 232.
Pyramidone, compound of, with mercuric chloride (ASTRE and BÉCAMEL), A., i, 835.
detection and estimation of antipyrine in (PATEIN), A., ii, 658.
estimation of (ASTRUC and PÉGURIER), A., ii, 778.
and antipyrine, estimation of, volumetrically, in presence of each other (PÉGURIER), A., ii, 871.
Pyranic oxygen, basicity of (FOSSE and LESAGE), A., i, 541, 917.
Pyrazine-2:5-dicarboxylic acid, synthesis of (FENTON), T., 806; P., 168.
Pyrazole derivatives, formation of, from pyrroles (CASTELLANA), A., i, 941.
*tri*bromo-, and its acetyl and silver derivatives, and 5-chloro-4-nitro- (HILL and BLACK), A., i, 381.
Pyrazoles, 5-amino- (MICHAELIS), A., i, 476.
Pyrazole-3:5-dicarboxylic acid, 4-hydroxy-, methyl ester (DIMROTH and EBERHARDT), A., i, 101.
Pyrazoline-1-carboxylamide (NEF), A., i, 4.
Pyrazoline ketones (AZZARELLO), A., i, 941.
5-Pyrazolone, 4-nitro-, and its metallic derivatives (HILL and BLACK), A., i, 381.

3-Pyrazolones (MICHAELIS, MEYER, HAHN, and BEHRENS), A., i, 377.
azo- and nitroso-derivatives of (MICHAELIS), A., i, 244.
Pyridan, definition of the term (DECKER), A., i, 667.
Pyridine, formation of, from pyrrole (PLANCHER and CARRASCO), A., i, 298.
purification of (BARTHE), A., i, 546.
electrolysis in (LEVI and VOGHERA), A., i, 572.
action of, on mono- and di-bromo-succinic esters (DUBREUIL), A., i, 14.
action of formaldehyde on (FORMÁNEK), A., i, 374.
as a solvent and ionising medium for inorganic metallic salts (SCHROEDER), A., ii, 306.
compounds, synthesis of, from β-keto-esters and ethyl cyanoacetate in presence of ammonia or amines (GUARESCHI, PASQUALI, PICCININI, ISSOGLIO, and QUENDA), A., i, 821.
derivatives, formation of, from methyl-pyrroles (PICTET), A., i, 545.
methyl derivatives, chlorination of (SELL), T., 799; P., 165.
*per*chromate, preparation of (HOFMANN and HIENDLMAIER), A., i, 821.
mercuri-iodides (FRANÇOIS), A., i, 373.
Pyridine, *di*chloro- (b.p.$_{(18)}$ 98°) (MAQUENNE and PHILIPPE), A., i, 80.
3:4:5-*tri*chloro- and 3:4:5-*tri*chloro-2-amino- (SELL), T., 802; P., 165.
2:6-*di*hydroxy-, alkyl derivatives of (ROGERSON and THORPE), T., 1685; P., 239.
Pyridine-2-carboxylic acid. See Picolinic acid.
Pyridine-3-carboxylic acid. See Nicotinic acid.
Pyridine-4-carboxylic acid. See *iso*-Nicotinic acid.
Pyridine-2:3:4-tricarboxylic acid and its anhydride, esters, betaine, and amic acid (KIRPAL), A., i, 234.
4-Pyridone, 3:5-*di*bromo- (FEIST and BAUM), A., i, 914.
3-hydroxy-, and its acetyl derivative (PERATONER and TAMBURELLO), A., i, 808.
Pyrimidine, amino-derivatives (GABRIEL), A., i, 244.
2:4:6-*tri*amino-, and its salts and isonitroso-derivative and 2:4:5:6-*tetra*amino-, and its sulphate and formyl derivative (TRAUBE), A., i, 101.
Pyrimidine, 2:4:5:6-*tetra*amino-, hydrochloride of (GABRIEL), A., i, 244.
6-amino-2-chloro- and 2:6-*di*chloro- (GABRIEL), A., i, 482.
2:6-*di*chloro-5-bromo- (WHEELER, BRISTOL, and JOHNSON), A., i, 482.
2-cyanamino-4-amino-6-hydroxy- and 2-cyanamino-4:6-*di*hydroxy- (MERCK), A., i, 670.
4:6-*di*imino-2-thio-, and its alkyl derivatives (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 671.
thio-derivatives (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 245.
Pyrimidines (WHEELER and BRISTOL), A., i, 482, 483; (JOHNSON and CLAPP), A., i, 835; (JOHNSON and JOHNS), A., i, 836.
Pyrites from Agordo, presence of bismuth in (PIUTTI and STOPPANI), A., ii, 718.
burnt, estimation of sulphur in (JENE), A., ii, 350; (GOTTLIEB), A., ii, 552.
estimation of sulphur in (PATTINSON), A., ii, 199; (LUNGE), A., ii, 350; (v. KNORRE), A., ii, 351; (DENNSTEDT and HASSLER), A., ii, 761.
Pyrobikhaconitine and its salts (DUNSTAN and ANDREWS), T., 1648; P., 234.
Pyrogallol (1:2:3-tri*hydroxybenzene*), condensation of, with acetone and with methyl ethyl ketone (FABINYI and SZEKI), A., i, 888.
and its ethers, glycollic acid derivatives of (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 135.
1:3-dimethyl ether, and its acetyl derivative (GRAEBE and HESS), A., i, 698.
trimethyl ether, the Zeisel reaction on (BOYD and PITMAN), T., 1255; P., 221.
4- and 5-amino-, -chloro-, and -iodo-, trimethyl ethers of (GRAEBE and SUTER), A., i, 703.
*di*bromo-, and its triacetyl derivative (PERKIN and SIMONSEN), T., 858.
Pyrogallolcarboxylamide, trimethyl ether (GRAEBE and SUTER), A., i, 703.
Pyroindaconitine and its hydrobromide (DUNSTAN and ANDREWS), T., 1631.
Pyrolusites, estimation of oxide of iron in (CORMIMBŒUF), A., ii, 286.
Pyromeconic acid, and some of its derivatives (PERATONER), A., i, 806.
molecular refraction of (HOMFRAY), T., 1454; P., 226.
pyridones from (PERATONER and TAMBURELLO), A., i, 807.

Pyromeconic acid, alkyl ethers of (PERATONER and SPALLINO), A., i, 806.
Pyrometer. See under Thermochemistry.
Pyromorphite from Issy-l'Évêque, radium from (DANNE), A., ii, 133.
Pyromucic acid, nitro-, and its methyl ester, amide, anilide, *p*-toluidide, and chloride (MARQUIS), A., i, 77.
*iso***Pyromucic acid** and its derivatives (CHAVANNE), A., i, 77.
Pyrone (WILLSTÄTTER and PUMMERER), A., i, 457.
and its hydrochloride, molecular refractions of (HOMFRAY), T., 1452; P., 226.
compounds, constitution of synthetical (PALAZZO and ONORATO), A., i, 459.
bromo-derivatives (FEIST and BAUM), A., i, 914.
3-hydroxy-. See Pyromeconic acid.
Pyrone-6-carboxylic acid, 3-hydroxy-. See Comenic acid.
4-Pyrophthalone and its additive salts and tetrachloro-derivative (DÜRING), A., i, 233.
Pyrotartaric acid. See Methylsuccinic acid.
Pyrrole, development of the chemistry of, in the last twenty-five years (CIAMICIAN), A., i, 80.
oxidation of, to maleimide (PLANCHER and RAVENNA), A., i, 333.
transformation of, into indoles (PLANCHER and CARAVAGGI), A., i, 298.
transformation of, into pyridine (PLANCHER and CARRASCO), A., i, 298.
2-chloro- and 2-chloro*tri*bromo- (MAZZARA and BORGO), A., i, 817.
2:5-*di*chloro- and 2:5-*di*chloro-3:4-*di*bromo- (MAZZARA and BORGO), A., i, 659.
*iso*nitroso-, anhydro-trioxime of (ANGELICO), A., i, 659.
Pyrroles, transformation of, into derivatives of pyrazole (CASTELLANA), A., i, 941.
nitroso-, transformations of the (ANGELICO), A., i, 659.
Pyrrole-blue-A and -B, and their derivatives (LIEBERMANN and HÄSE), A., i, 841.
Pyrrole-2-carboxylic acid, methyl ester, action of sulphuryl chloride on (MAZZARA and BORGO), A., i, 817.
Pyrrole-2:5-dibenzoic acid (REISSERT and ENGEL), A., i, 900.
Pyrrole reaction, the (NEUBERG), A., ii, 127.
Pyrrolidine-2-carboxylic acid, synthesis of (SÖRENSEN), A., i, 749.
detection of (ALEXANDROFF), A., ii, 869.
Pyrrolidine-2-carboxylic acids, 4-hydroxy-, isomeric (*hydroxyprolines*), synthesis of, and their β-naphthalenesulphone derivatives and copper salts (LEUCHS), A., i, 545.
Pyrrolidone nitrosoamine (GABRIEL), A., i, 651.
thio- (TAFEL and LAVACZECK), A., i, 465.
Pyrrolidone nucleus, stability of the (KÜHLING and FALK), A., i, 372.
Pyruvic acid, formation of (PASTUREAU), A., i, 572.
thermal study of the acid function of; influence of ketonic oxygen (MASSOL), A., ii, 302.
condensation of, with hippuric acid (ERLENMEYER and ARBENZ), A., i, 240.
p-xylylhydrazone, and its ethyl derivative (PLANCHER and CARAVAGGI), A., i, 298.
colour reactions of, with α- and β-naphthols in sulphuric acid solution (ALVAREZ), A., ii, 487.
Pyrylium, definition of the term (DECKER), A., i, 667.

Q.

Quartz vessels, use of, in the laboratory (MYLIUS and MEUSSER), A., ii, 316.
use of, for lecture experiments (FISCHER), A., ii, 20.
Quercitol, an isomeride of (v. KOSTANECKI and RUDSE), A., i, 367.
Quercitrin (BRAUNS), A., i, 74.
Quinaldine. See 2-Methylquinoline.
Quinaldinic acid. See Quinoline-2-carboxylic acid.
*iso***Quinaldinic acid.** See *iso*Quinoline-1-carboxylic acid.
Quinazoline and its derivatives (GABRIEL and COLMAN), A., i, 944.
Quinhydrone, dissociation of (TORREY and HARDENBERGH), A., i, 218.
derivative, $C_{15}H_{12}O_6$, from the oxidation of the fluorenone derivative, $C_{15}H_{12}O_5$ (DUREGGER), A., i, 702.
Quinine and tetanus (VINCENT), A., ii, 104.
solubility of, in ammonia (DUNCAN), A., ii, 427.
salts and ammonium salts (GUIGUES), A., i, 811.
formates (LACROIX), A., i, 716.

Quinine hydrochloride, normal (ERBA), A., i, 151.
sulphate, testing of (DUNCAN), A., ii, 427.
reactions of (REICHARD), A., ii, 561, 659.
estimation of (ROBERTSON), P., 242.
estimation of, in cinchona barks (VIGNERON), A., ii, 363.
o-**Quinocatechol** ethers, bromo-derivatives of (JACKSON and RUSSE), A., i, 217.
*hexa*bromo-, preparation of, and action of methyl alcohol on (JACKSON and SHAFFER), A., i, 888.
Quinol (1:4-di*hydroxybenzene*, *hydroquinone*), freezing points of mixtures of, with *p*-toluidine, α-naphthylamine, and picric acid (PHILIP and SMITH), T., 1747; P., 255.
course of the reaction in the oxidation of (MARCHADIER), A., i, 342.
action of hippuryl chloride on (FISCHER), A., i, 893.
dimethyl ether, fluorescence of derivatives of (KAUFFMANN and BEISSWENGER; KAUFFMANN and GROMBACH), A., i, 280.
diphenyl ether (ULLMANN, SPONAGEL, and STEIN), A., i, 645.
Quinol, hydroxy-, condensation of, with aldehydes (HEINTSCHEL), A., i, 809.
Quinolan, definition of the term (DECKER), A., i, 667.
Quinolcarboxylic acid, behaviour of, towards oxidising agents, and its ethyl ester (JUCH), A., i, 701.
methyl ester and methyl ethers of (GRAEBE and MARTZ), A., i, 702.
Quinoline, formation of, from 2-methylindole (PICTET), A., i, 545.
action of benzoyl chloride on (REISSERT), A., i, 925.
action of, on mono- and di-bromosuccinic esters (DUBREUIL), A., i, 14.
and 3- and 6-bromo-, 3-bromo-5-nitro-, and 5- and 8-nitro-, methonitrates of (DECKER, GADOMSKA, and GIRARD), A., i, 469.
5:8- and 6:8-*di*- and 2:6:8-*tri*-bromo-, 3-bromo-8-nitro-, 8-*mono*- and 6:8-*di*-nitro-, meth- and eth-iodides of (DECKER, GADOMSKA, SANDBERG, and STAVROLOPOULOS), A., i, 374.
5-bromo-6-hydroxy-, alkyl haloid derivatives and their salts (HOWITZ and BÄRLOCHER), A., i, 375.
bromohydroxy-derivatives, conversion of, into chlorohydroxy-derivatives (HOWITZ and WITTE), A., i, 471.
Quinoline, chloroiodohydroxy-. See Vioform.
5-hydroxy-, the thalleioquinine reaction with (FÜHNER), A., i, 828.
4- and 5-hydroxy-, Jaffé's kynurenic acid reaction with (FÜHNER), A., i, 828.
5- and 8-nitro-, separation of (DECKER, GADOMSKA, SANDBERG, and STAVROLOPOULOS), A., i, 375.
Quinoline derivatives (DECKER and REMFRY), A., i, 828.
synthesis of (v. NIEMENTOWSKI), A., i, 611.
replacement of bromine by chlorine in (HOWITZ and WITTE), A., i, 469.
Quinoline dyes, new class of (BESTHORN and IBELE), A., i, 612.
*iso***Quinoline** from methylphthalimidine (PICTET), A., i, 545.
action of benzoyl chloride on (REISSERT), A., i, 926.
8-Quinolinealdehyde, derivatives of (HOWITZ and SCHWENK), A., i, 471.
Quinoline-2-carboxylic acid and its methyl ester, amide, chloride, and nitrile (MEYER), A., i, 155, 666; (REISSERT), A., i, 472; (BESTHORN and IBELE), A., i, 612.
benzoin ester (REISSERT), A., i, 472.
Quinoline-8-carboxylic acid, 3-bromo-, and its barium salt (HOWITZ and SCHWENK), A., i, 472.
*iso***Quinoline-1-carboxylic acid** and amide (REISSERT), A., i, 927.
Quinolones, 8-hydroxy-, replacement of bromine by chlorine in (HOWITZ and WITTE), A., i, 469.
Quinolphthalein salts and β- and γ-oximes, constitution of (MEYER and SPENGLER), A., i, 440.
Quinol-5-sulphonic acid, 2-amino-3:6-*di*hydroxy-, hydrochloride of (NIETZKI and HUMANN), A., i, 218.
Quinone, $C_{16}H_{18}O_4$, from di-*p*-hydroxystilbene ψ-dibromide and methyl alcohol (ZINCKE and MÜNCH), A., i, 55.
o-**Quinone**. See *o*-Benzoquinone.
p-**Quinone**. See *p*-Benzoquinone.
Quinones, action of tertiary amines on (JACKSON and CLARKE), A., i, 908.
action of mercaptides on (SAMMIS), A., i, 797.
Quinoneanil, *hexa*chloro-. See Phenylimino-2:3:6-*tri*chlorobenzoquinone, *s-tri*chloro-.
Quinonedi-imine, *di*chloro-, action of, on ββ-dinaphthylamine (SCHAPOSCHNIKOFF and GOLEFF), A., i, 644.

Quinonehydrazones, relation between, and *p*-hydroxyazo-compounds (BORSCHE), A., i, 161; (BORSCHE and OCKINGA), A., i, 719.
Quinoneimines (WILLSTÄTTER and PFANNENSTIEL), A., i, 69.
Quinone-mono- and **-di-methylimines** (WILLSTÄTTER and PFANNENSTIEL), A., i, 669.
Quinonoid compounds (WILLSTÄTTER and KALB), A., i, 361; (WILLSTÄTTER and PFANNENSTIEL), A., i, 669.
Quinophthalone, homologues of (EIBNER), A., i, 716.
Quinotoxine, *iso*nitroso-, action of methyl iodide on (ROHDE and SCHWAB), A., i, 228.

R.

Racemic compounds, resolution of (MARCKWALD and PAUL), A., i, 285; (NEUBERG and FEDERER), A., i, 299.
new method of separating (ERLENMEYER and ARNOLD), A., i, 192.
possibility of resolving, by circularly polarised light (BYK), A., ii, 70.
Racemisation phenomena occurring during the hydrolysis of optically active menthyl and bornyl esters by alkali (MCKENZIE and THOMPSON), T., 1004; P., 184.
Racemism (BRUNI and FINZI), A., ii, 2; (BRUNI), A., ii, 69.
Radiant energy. See under Photochemistry.
Radiations and **Radioactivity.** See under Photochemistry.
Radiotellurium (MARCKWALD), A., ii, 159.
and polonium (MARCKWALD), A., ii, 623.
radioactivity constant of (MARCKWALD, GREINACHER, and HERRMANN), A., ii, 623.
new radiation produced in atmospheric air by rays from (WALTER), A., ii, 567.
decay of the radioactivity of (GREINACHER), A., ii, 623.
Radiothorium (HAHN), A., ii, 432, 789; (RAMSAY), A., ii, 789.
Radium, origin of (BOLTWOOD), A., ii, 295; (STRUTT), A., ii, 787.
occurrence of, in Fango mud and soil from Capri (GIESEL), A., ii, 132.
production of, from uranium (BOLTWOOD), A., ii, 663.
Radium and uranium, relative proportion of, in radioactive minerals (RUTHERFORD and BOLTWOOD), A., ii, 568.
properties of, in minute quantities (EVE; RUTHERFORD), A., ii, 367; (RUDGE), A., ii, 496; (VOLLER), A., ii, 663.
spectrum regularities and the atomic weight of (RUDORF), A., ii, 69.
atomic weight of, and the periodic system (JONES), A., ii, 789.
effect of high temperatures on the rate of decay of the active deposit from (BRONSON), A., ii, 567.
ionisation curves of (BRAGG and KLEEMAN), A., ii, 5; (RUTHERFORD), A., ii, 495; (BRAGG), A., ii, 791.
method of transmission of the excited activity of, to the cathode (MAKOWER; JACKSON), A., ii, 792.
decomposition of water by (RAMSAY), A., ii, 665.
slow transformation products of (RUTHERFORD), A., ii, 664.
α-particles of (BRAGG), A., ii, 791.
scintillations produced by (WOOD), A., ii, 664.
influence of, on the respiratory energy of germinating grains (MICHEELS and DE HEEN), A., ii, 431.
emanations, molecular weight of (MAKOWER), A., ii, 220.
ionisation due to (DUANE), A., ii, 219.
ionisation produced between parallel plates by (DUANE), A., ii, 297.
the constant for the rate of decay of (SACKUR), A., ii, 367.
increase of the conductivity of water by (GRASSI), A., ii, 793.
action of, on minerals and gems (BASKERVILLE and LOCKHART), A., ii, 622.
action of, on pathogenic bacteria (DORN, BAUMANN, and VALENTINER), A., ii, 748.
action of, on chymosin (SCHMIDT-NIELSEN), A., ii, 48.
influence of, on the toxicity of venoms (PHISALIX), A., ii, 339.
rays, electrification produced by (RIGHI), A., ii, 792.
diminution of resistance produced in bad conductors by (RIGHI), A., ii, 793.
action of, on chemical action (JORISSEN and RINGER), A., ii, 219.
action of, on caoutchouc (DITMAR), A., ii, 72.

Radium rays, synthesis of water under the action of (DAVIS and EDWARDS), A., ii, 448.
luminescope for comparing substances under the influence of (WEBSTER), A., ii, 71.
α-rays, classification of, and absorption of α-rays (BRAGG), A., ii, 4.
some properties of (BRAGG and KLEEMAN), A., ii, 5; (RUTHERFORD), A., ii, 495; (BECQUEREL), A., ii, 665.
deflection of (MACKENZIE), A., ii, 790.
α- and β-rays, charge carried by (RUTHERFORD), A., ii, 621.
β- and γ-rays, secondary radiation caused by (EVE), A., ii, 4.
phosphorescence caused by (BEILBY), A., ii, 293.
Radium bromide, action of, on fructose (MORRELL and BELLARS), T., 291; P., 80.
effects produced by, on a photographic plate (PETRI), A., ii, 431.
action of, on the electrical resistance of metals (SABAT), A., ii, 219.
heat action of (HESEHUS), A., ii, 297.
action of the radiations from, on some organisms (DIXON and WIGHAM), A., ii, 548.
recognition of helium bromide from (GIESEL), A., ii, 496.
Radium mineral, new (DANNE), A., ii, 133.
Raffinose, quantitative hydrolysis of (PFYL and LINNE), A., ii, 770.
Rain. See under Water.
Rat, white, excretion of nitrogen in the (HATAI), A., ii, 740.
Red currant leaves, existence of hydrogen cyanide in (GUIGNARD), A., ii, 752.
Reduction and oxidation (SCHOORL), A., ii, 692.
by metallic calcium (BECKMANN, BECK, and SCHLEGEL), A., i, 335.
Reduction and **oxidation reactions**, reversible, in solutions (SCHOCH), A., ii, 19.
Refraction. See under Photochemistry.
Refrigerator, crucible (STEINLEN), A., ii, 349; (MARGOSCHES), A., ii, 421.
Renal activity, effect of chloroform and ether on (THOMPSON), A., ii, 273.
Rennin (*chymosin*), action of radium emanations on (SCHMIDT-NIELSEN), A., ii, 48.
action of, on casein and milk (LAQUEUR), A., ii, 848.
human, time laws of (BECKER), A., ii, 732.
Resacetein, three position isomeric hydroxyl derivatives of (BÜLOW and SAUTERMEISTER), A., i, 150.
Resacetophenone dimethyl ether, α-bromo- (BLOM and TAMBOR), A., i, 916.
*iso***Resacetophenone.** See 1:5-Diacetylbenzene, 2:4-*di*hydroxy-.
Resin (*rosin*), estimation of, in shellac (LANGMUIR), A., ii, 214.
Resins, exudation of (TSCHIRCH), A., ii, 413.
See also Copals, Euphorbium, Guaiacum resin, Lac resin, and Scammony resins.
Resin oil of *Pinus longifolia* (RABAK), A., i, 911.
Resin spirit (*rosin spirit*), detection of (VALENTA), A., ii, 657.
Resinotannols (TSCHIRCH and HOFFBAUER), A., i, 913.
Resonance radiation of electrons (WOOD), A., ii, 783.
Resorcinol (1:3-di*hydroxybenzene*), freezing points of mixtures of, with *p*-toluidine, α-naphthylamine, and picric acid (PHILIP and SMITH), T., 1744; P., 255.
condensation of, with benzil (v. LIEBIG), A., i, 781.
action of hippuryl chloride on (FISCHER), A., i, 892.
red sulphur dyes from (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 913.
Resorcinol, iodonitro-, methyl ethers of (MELDOLA and STEPHENS), T., 1201; P., 218.
2:4-*di*nitro-, and its barium derivatives (v. HEMMELMAYR), A., i, 288.
α-nitroso-, monoethyl ethers (HENRICH), A., i, 201.
Resorcinolmercuriacetic acid, mercury salt (LEYS), A., i, 433.
Resorcinylanthranol and its triacetyl derivative (LIEBERMANN and MAMLOCK), A., i, 522.
Resorcylaldehyde (SOMMER), A., i, 141.
β-**Resorcylic acid** (2:4-di*hydroxybenzoic acid*), nitro-derivatives (v. HEMMELMAYR), A., i, 288.
Respiration, Cheyne-Stokes (PEMBREY and ALLEN), A., ii, 263.
effect of increased carbon dioxide tension with increased atmospheric pressure on (HAM and HILL), A., ii, 728.
of rarefied air, action of oxygen and of oxygen and carbon dioxide on the sickness produced by the (AGGAZZOTTI), A., ii, 835.

Respiration experiments in man (HALDANE and PRIESTLEY), A., ii, 400; (FITZGERALD and HALDANE), A., ii, 539; (BOYCOTT and HALDANE), A., ii, 729.
See also Lungs.
Respiratory activity, measurement of (THUNBERG), A., ii, 44.
Retina, developing, response of the, to light and radium (MILROY), A., ii, 728.
Rhamnol and its acetyl derivative from Cascara bark (JOWETT), A., ii, 193.
Rhamnose anilide (HERMANN), A., i, 327.
estimation of (ELLETT and TOLLENS), A., ii, 210.
Rhamnosone, preparation of (MORRELL and BELLARS), T., 289; P., 80.
Rhaponticin and its diacetyl derivative and **Rhapontigenin** and its diacetyl and dibenzoyl derivatives (TSCHIRCH and CRISTOFOLETTI), A., ii, 852.
from English rhubarb (TSCHIRCH), A., ii, 659.
Rhein from Rheums cultivated in Berne (TSCHIRCH and EIJKEN), A., ii, 605.
Rheum palmatum and *R. officinale* cultivated in Berne, rhizomes of (TSCHIRCH and EIJKEN), A., ii, 605.
Rheum Rhaponticum, root of (TSCHIRCH and CRISTOFOLETTI), A., ii, 851.
Rhizocarpic acid, formula of (ZOPF), A., i, 212.
Rhizoplacic acid (ZOPF), A., i, 790.
Rhodamines (NOELTING and DZIEWOŃSKI), A., i, 935.
Rhodanic acid and its condensation with aldehydes (ANDREASCH and ZIPSER), A., i, 932.
Rhodanic acids, substituted, and their aldehyde condensation products (ANDREASCH and ZIPSER), A., i, 930; (STUCHETZ), A., i, 933.
Rhodium, influence of very strong electromagnetic fields on the spark spectra of (PURVIS), P., 241.
absorption of hydrogen by (QUENNESSEN), A., ii, 42.
comparative absorption of hydrogen by palladium and (QUENNESSEN), A., ii, 172.
colloidal (GUTBIER and HOFMEIER), A., ii, 533.
Rhodium-ammonium compounds, physiological action of (BOCK), A., ii, 49.
Rhodium, reaction of (ALVAREZ), A., ii, 485.
Rhubarb, Chinese and English, easy way of distinguishing (TSCHIRCH), A., ii, 659.
Rhubarb forcing, etherisation as an aid in (STUART), A., ii, 756.
Rice, manurial experiments on (SUZUKI), A., ii, 347, 348; (KATAYAMA), A., ii, 347.
pot experiments to determine the limits of endurance of, for certain injurious substances (GUTHRIE and HELMS), A., ii, 755.
Rice refuse, composition of (FRAPS), A., ii, 114.
Ricin (OSBORNE and MENDEL), A., ii, 188.
isolation of, from castor oil beans (OSBORNE, MENDEL, and HARRIS), A., i, 753.
Ricinine, occurrence of, in young Ricinus plants (SCHULZE and WINTERSTEIN), A., ii, 112.
constitution of (MAQUENNE and PHILIPPE), A., i, 80.
Ricinus seeds, proteids from (WINTERSTEIN), A., i, 727; (OSBORNE, MENDEL, and HARRIS), A., i, 753.
Rings, bridged, synthetical formation of (PERKIN and SIMONSEN), P., 256.
Rochelle salt, chemical changes attending the aërobic bacterial fermentation of (ADENEY), A., ii, 340.
Roots, chemotropism of (LILIENFELD), A., ii, 474.
acidity of (MONTANARI), A., ii, 191.
estimation of the carbon dioxide given off by, during their development (KOSSOWITSCH), A., ii, 549.
Rosaniline hydrochloride, colourless (LAMBRECHT and WEIL), A., i, 97.
Rosin. See Resin.
Rosocyanin and its salts (JACKSON and CLARKE), A., i, 804.
Rotation. See under Photochemistry.
Roussin's salts. See Iron nitrosulphides.
Rubidium, preparation of (HACKSPILL), A., ii, 585.
Rubidium fluorides (CHABRIÉ and BOUCHONNET), A., ii, 165; (EGGELING and MEYER), A., ii, 707.
titanium double sulphates (STÄHLER), A., ii, 596.
*penta*sulphide (BILTZ and WILKE-DÖRFURT), A., ii, 162.
Rust. See under Iron.
Ruthenium, influence of very strong electromagnetic fields on the spark spectra of (PURVIS), P., 241.
Ruthenium, halogen compounds (GUTBIER and TRENKNER), A., ii, 463.
hydroxide, liquid hydrosol of (GUTBIER and HOFMEIER), A., ii, 533.

Ruthenium oxides (GUTBIER and RANSOHOFF), A., ii, 534.
Rye, development of (SCHULZE), A., ii, 754.

S.

Sδ, phosphorescent spectra of (CROOKES), A., ii, 783.
"Saccharin." See *o*-Benzoic sulphinide.
Saccharins, formation of, from hexoses (WINDAUS), A., i, 510.
Saccharomyces cerevisiæ, influences regulating the reproductive functions of (BROWN), T., 1395; P., 225.
Saccharose. See Sucrose.
Safranines, unsymmetrical (BARBIER and SISLEY), A., i, 840.
*apo***Safranones**, action of hydroxylamine on (FISCHER and HEPP), A., i, 948.
*iso***Safrole**, new synthesis of (MAMELI), A., i, 203.
*di*bromide, oxidation of (HOERING), A., i, 902.
substitution in, and elimination of bromine atoms from (HOERING), A., i, 903.
glycol, *mono-* and *di*-bromo- and the β-acetate of the dibromo-, and ketone, *mono-* and *di*-bromo-, and their oximes (HOERING), A., i, 904.
hydrochloride and its reactions with sodium methoxide, ethoxide, and amyloxide (SCHIMMEL & Co.), A., i, 537.
ketone and oxide and *mono-* and *di*-bromo- (HOERING), A., i, 593.
oxide and its reactions (HOERING), A., i, 903.
nitro- (HOERING), A., i, 592, 902.
Salicylaldehyde, action of an ammoniacal solution of silver oxide on (BRUNNER), A., i, 59.
carbonate of, and its dioxime and bisphenylhydrazone (EINHORN and HAAS), A., i, 894.
Salicylamide, benzoyl derivatives of (EINHORN and SCHUPP), A., i, 778; (AUWERS; EINHORN and HAAS), A., i, 894.
labile isomerism among (TITHERLEY and HICKS), T., 1207; P., 219; (TITHERLEY), P., 288.
Salicylic acid (*o-hydroxybenzoic acid*) (TIJMSTRA), A., i, 439.
mechanism of the synthesis of (DE BRUYN and TIJMSTRA), A., i, 209.
solubility of, in various solvents (HOFFMANN and LANGBECK), A., ii, 374.
Salicylic acid (*o-hydroxybenzoic acid*), influence of various sodium salts on the solubility of (PHILIP), T., 987; P., 200.
action of an ammoniacal solution of silver oxide on (BRUNNER), A., i, 59.
iron compounds of (ROSENTHALER), A., i, 47.
benzylphenyl ether (MAJONE), A., i, 278.
o-methoxyphenyl ether (ULLMANN and ZLOKASOFF), A., i, 598.
detection of, in foods (GORNI), A., ii, 658.
estimation of, colorimetrically, in foodstuffs (HARRY and MUMMERY), A., ii, 426.
Salicylic acid, dipotassium salt, action of potassium hypochlorite, hypobromite, and hypoiodite on (LASSAR-COHN and SCHULTZE), A., i, 893.
sodium salt, compound of, with barium theobromine. See Barutine.
Salicylic acid, ethyl ester, pharmacology of (HOUGHTON), A., ii, 409.
Salicylic acid, hydroxy-. See Quinolcarboxylic acid.
3:5-*di*nitro-, ethyl ester, action of potassium cyanide on (BORSCHE and GAHRTZ), A., i, 894.
Salicylidene-acetylacetone and its oxime and derivatives and **-bispiperidine** (KNOEVENAGEL and ARNOT), A., i, 65.
Salicylonitrile, carbonate of, and its ethyl ester (EINHORN and HAAS), A., i, 894.
Salt, common. See Sodium chloride.
Salt diuresis, mechanism of (LOEWI and ALCOCK), A., ii, 739.
Saltpetre. See Potassium nitrate.
Chili. See Sodium nitrate.
Salts, formation of, in solution, especially in the case of substances exhibiting tautomerism (BRÜHL and SCHRÖDER), P., 164; A., i, 407, 506; ii, 70, 235.
molecular weight of, in indifferent solvents (HANTZSCH), A., ii, 305.
constitution of complex (CAMERON), A., ii, 529.
melting and transition points of some (HÜTTNER and TAMMANN), A., ii, 229.
solubility of, in mixtures of alcohol and water (FLECKENSTEIN), A., ii, 688.
solubility of some sparingly soluble, in water at 18° (KOHLRAUSCH), A., ii, 152.

Salts, reactions between, in acetone (NAUMANN), A., ii, 29.
reactions between, in non-aqueous solutions (NAUMANN and SCHROEDER), A., ii, 30.
the toxic and anti-toxic action of (MATHEWS), A., ii, 106.
indirect estimation of carbon dioxide in (LUTZ and TSCHISCHIKOFF), A., ii, 203.
See also Metallic salts.
Samarium, atomic weight of (EBERHARD), A., ii, 587.
chlorides, compounds of, with gaseous ammonia (MATIGNON and TRANNOY), A., ii, 165.
europium, and gadolinium, spectrographic investigations of the Urbain-Lacombe method for the separation of (EBERHARD), A., ii, 587.
Sambucus nigra, hydrogen cyanide from (GUIGNARD), A., ii, 604; (BOURQUELOT and DANJOU), A., ii, 605; (GUIGNARD and HOUDAS), A., ii, 648.
Sambunigrin from *Sambucus nigra* (BOURQUELOT and DANJOU), A., i, 912; ii, 605; (GUIGNARD), A., ii, 604.
Sand, grey, humic acids of (MAYER), A., ii, 55.
Sandstone, brown, humic acids of (MAYER), A., ii, 55.
Santonin, the oxonium nature of, and its salts and metallic haloids (WEDEKIND and KOCH), A., i, 211.
behaviour of halogens towards, and its oxonium bromide and iodide (WEDEKIND and KOCH), A., i, 212.
molecule, introduction of nitrogen into the, and the physiological behaviour of certain santonin derivatives (WEDEKIND), A., i, 134.
Santonin, chloro- (WEDEKIND and KOCH), A., i, 212, 529.
α-hydroxy-. See *iso*Artemisin.
Saponification. See Hydrolysis under Affinity.
Saponin, preparation of a non-poisonous (MERCK), A., i, 365.
and cholesterol, antagonistic action of (HAUSMANN), A., ii, 744.
Saponins, pentose reactions of (ROSENTHALER), A., i, 539.
Sarcolactic acid. See *d*-Lactic acid.
Sarracenia purpurea. See Pitcher plant, purple.
Saturnismus chronicus, composition of the blood in (ERBEN), A., ii, 741.
Sawdust, detection of, in bread and flour (PAGANINI), A., ii, 360.
Scammonose, the so-called (VOTOČEK and VONDRÁČEK), A., i, 74.
Scammony resins (GUIGUES), A., i, 803.
Scandium, arc spectrum of, and its relation to celestial spectra (LOCKYER and BAXANDALL), A., ii, 392.
Scatole. See 3-Methylindole.
Scatoleacetic acid, Nencki's. See Indole-3-propionic acid.
Schiff's bases, conversion of, into hydrazones, oximes, and semicarbazones (OTT), A., i, 376.
Schweinfurt's green, composition of homologues of (VIARD), A., i, 8.
Scleroderms, chemistry of the (BAMBERGER and LANDSIEDL), A., ii, 852.
Scopolamine from Datura (SCHMIDT; KIRCHER), A., i, 717.
Sea anemones, the poison of (RICHET), A., ii, 746.
Sea water. See under Water.
Sebacic acid, *αθ-di*amino-, synthesis of, and its ethyl ester, phenylcarbimide derivative, and picrate (NEUBERG and NEIMANN), A., i, 687.
*di*aminohydroxy- (WOHLGEMUTH), A., i, 103, 620.
Seeds, action of liquid air on the life of (BECQUEREL), A., ii, 604.
action of chloroform and ether on dry (BECQUEREL), A., ii, 474.
transformations of nitrogenous substances in, during maturation (ANDRÉ), A., ii, 604.
development of organic matter in, during maturation (ANDRÉ), A., ii, 50.
ripening, proteolytic enzyme of (ZALESKI), A., ii, 549.
proteid formation in (ZALESKI), A., ii, 549.
Selenic and **Selenious acids**. See under Selenium.
Selenium, electrical conductivity of (COSTE), A., ii, 794.
colloidal (PAAL and KOCH), A., ii, 158.
colloidalising action of caoutchouc on (DITMAR), A., ii, 701.
Selenium *hexa*fluoride (PRIDEAUX), P., 238.
Selenious acid, action of hydrogen sulphide on (GUTBIER and LOHMANN), A., ii, 84, 241.
separation of selenium from (BILTZ and GAHL), A., ii, 24.
Selenic acid (OECHSNER DE CONINCK), A., ii, 517.
Selenium sulphide (GUTBIER and LOHMANN), A., ii, 241.
sensitiveness of, to light (GUTBIER and LOHMANN), A., ii, 84.
Selenium, separation of, from selenious acid (BILTZ and GAHL), A., ii, 24.
α-**Selenocyanopropionic acid** and its salts and esters (SIMON), A., i, 866.

3-Selenomethyl-1-phenyl-5-methylpyrazole (3-ψ-*selenopyrine*) and its salts, alkyl haloids, and bromides (MICHAELIS and HAHN), A., i, 380.
2:3-Seleno-1-phenyl-2:5-dimethylpyrazole (3-*selenopyrine*) and its salts, alkyl haloids, and bromides (MICHAELIS and HAHN), A., i, 379.
Semicarbazide, preparation, use, and recovery of (BOUVEAULT and LOCQUIN), A., i, 178.
condensation of, with ethyl diacetylsuccinic acid (BÜLOW, RIESS, and SAUTERMEISTER), A., i, 660.
hydrochloride, action of, on phthalic anhydride (DUNLAP), A., i, 830.
estimation of (MASELLI), A., ii, 561.
Semicarbazidocamphoformeneaminecarboxylic acid (TINGLE and HOFFMANN), A., i, 800.
Semicarbazones, new reactions of (BORSCHE), A., i, 305.
Semioxamazide, estimation of (MASELLI), A., ii, 561.
Sera, antibacterial (CROFTON), A., ii, 747.
Serine, synthesis of, and its benzoyl derivative (ERLENMEYER and STOOP), A., i, 119.
*iso***Serine**, α-bromoisohexoyl derivative (FISCHER and KOELKER), A., i, 692.
Serum, action of chloroform on (EDIE), A., i, 397.
action of fluorescent substances on (PFEIFFER), A., ii, 465.
Serum-albumin, crystallised (COHN), A., i, 103.
antitryptic action of (HEDIN), A., ii, 541.
Serum-globulins, carbohydrates from (LANGSTEIN), A., i, 555.
Sesamé oil (SPRINKMEYER and WAGNER), A., ii, 775.
Sesquioxides, derivatives of the (CAMERON), A., ii, 529.
Sewage purification, biochemistry of; bacteriolysis of peptones and nitrates (GAGE), A., ii, 474.
Shellac, estimation of rosin in (LANGMUIR), A., ii, 214.
Shrubs, forcing experiments with, by means of ether or chloroform (DRUDE, NEUMANN, and LEDIEN), A., ii, 191.
Silica. See Silicon *di*oxide.
Silicates, Silicic acid, and Silicides. See under Silicon.
Silicochloroform (RUFF, ALBERT, and GEISEL), A., ii, 518.
action of, on some fluorides (RUFF and ALBERT), A., ii, 161.
Silicofluoroform, preparation and properties of (RUFF and ALBERT), A., ii, 161.
Silicon, atomic weight of (BECKER and MEYER), A., ii, 246; (MEYER), A., ii, 815.
spectrum of (LOCKYER and BAXANDALL), A., ii, 129; (LUNT), A., ii, 782.
decomposition of (GROSS), A., ii, 816.
action of, on hydrated metatitanic acid (TAMMANN), A., ii, 256.
Silicon *tetra*fluoride, preparation and some physical constants of (MOISSAN), A., ii, 26.
Silicides, preparation of (JÜNGST & MEWES), A., ii, 316.
Silicon *di*oxide (*silica*), supposed volatility of, at the moment of its liberation by strong acids (FRIEDHEIM and PINAGEL), A., ii, 584.
catalytic influence of, on the reaction, $2CO+O_2=2CO_2$ (BODENSTEIN and OHLMER), A., ii, 692.
fused, use of vessels of, in chemistry (BERTHELOT), A., ii, 308, 316, 386, 810.
qualitative detection of (PETERSEN), A., ii, 62.
and fluorine, estimation and separation of (SEEMANN), A., ii, 555.
and tungsten trioxide, separation of (FRIEDHEIM, HENDERSON, and PINAGEL), A., ii, 614.
Silicic acid (JORDIS), A., ii, 317.
colloidal, coagulation of (PAPPADÀ), A., ii, 387.
Silicic acids, preparation of, by the decomposition of natural silicates (TSCHERMAK), A., ii, 816.
Silicates (JORDIS and KANTER), A., ii, 88, 161, 248.
containing alumina and haloids, basic (WEYBERG), A., ii, 89.
heat of formation of (TSCHERNOBÉEFF), A., ii, 678.
natural, action of silver nitrate and thallous nitrate on certain (STEIGER; CLARKE), A., ii, 707.
decomposition of (TSCHERMAK), A., ii, 816.
products of the weathering of, in clay, volcanic, and laterite soils respectively (VAN BEMMELEN), A., ii, 89.
analysis of, sources of error in the (JORDIS), A., ii, 610.
estimation of alkalis in, by L. Smith's method (STEINLEN), A., ii, 349; (MARGOSCHES), A., ii, 421.
Silicon organic compounds (KIPPING), P., 65; (TAURKE), A., i, 422.
including the group SiN, formation of (REYNOLDS), T., 1870; P., 249.

Silicon, graphitic, analysis of (SPIELMANN), A., ii, 610.
improvement of Drown and Shimer's method of estimating, in iron (THILL), A., ii, 62.
estimation of, in ferrosilicon (LUCCHESE), A., ii, 118; (K.), A., ii, 420.
Siliconitrogen hydride, properties of (RUFF, ALBERT, and GEISEL), A., ii, 519.
Silicophenyl-amide and **-imide**, bromination of (REYNOLDS), T., 1870; P., 249.
Silicotungstates, analysis of (FRIEDHEIM, HENDERSON, and PINAGEL), A., ii, 614.
Silk, process of dyeing (SUIDA), A., i, 457; (GELMO and SUIDA), A., i, 714.
as a dye producer (PAULY and BINZ), A., i, 75.
Silk-worm, variations in dextrose, glycogen, fat, and albumin in the course of the metamorphoses in the (VANEY and MAIGNON), A., ii, 406, 467.
Silk-worm disease, the large bacillus in (SAWAMURA), A., ii, 472.
Siloxicon, analysis of (SPIELMANN), A., ii, 610.
Silver, electrolytic deposition of (SNOWDON), A., ii, 452.
determination of the electrochemical equivalent of (VAN DIJK), A., ii, 137.
colloidal (GUTBIER and HOFMEIER), A., ii, 452.
absorption compounds of, with organic colloids (LOTTERMOSER), A., ii, 318.
Silver alloys with aluminium (PETRENKO), A., ii, 635.
with cadmium, properties of (ROSE), A., ii, 86.
Silver salts, anodic decomposition during the electrolysis of (BOSE), A., ii, 299.
colloidal (LOTTERMOSER), A., ii, 586.
Silver amide (FRANKLIN), A., ii, 582.
carbonate, application of Watt's principle to the dissociation of (COLSON), A., ii, 304.
*di*chromate (MAYER), A., ii, 86.
haloids, action of ammonium persulphate on (DITTRICH and BOLLENBACH), A. ii, 239.
iodide, photoelectric phenomena exhibited by moist (SCHOLL), A., ii, 297.
specific gravity of pure fused (BAXTER), A., ii, 82.
Silver mercuric iodide, molecular weight of (HERZ and KNOCH), A., ii, 822.
nitrate, determination of the relative velocities of the ions of, in mixtures of the alcohols and water, and on the conductivity of such mixtures (JONES and BASSETT), A., ii, 8.
and thallium nitrate, equilibrium between (VAN EIJK), A., ii, 445.
action of, on certain natural silicates (STEIGER; CLARKE), A., ii, 707.
reaction between disodium hydrogen phosphate and (OSAKA), A., ii, 820.
nitrite, two varieties of (RÂY and GAÑGULI), P., 278; (DIVERS), P., 281.
action of heat on (RÂY and GAÑGULI), P., 279; (DIVERS), P., 281.
influence of silver nitrate on the solubility of (NAUMANN and RÜCKER), A., ii, 522; (ABEGG and PICK), A., ii, 586.
oxide, autocatalytic decomposition of (LEWIS), A., ii, 578.
action of carbon monoxide on (DEJUST), A., ii, 453.
*di*oxide and *per*oxynitrate (WATSON), P., 297.
Silver cyanate, action of, on acyl chlorides (BILLETER), A., i, 560, 584.
palladothiocyanate (BELLUCCI), A., i, 122.
Silver, separation of, from lead (LIDHOLM), A., ii, 204.
Siphon, constant-level feeding (ANGELUCCI), A., ii, 694.
with a mercury valve (PILZ), A., ii, 155.
Skimmianine from *Skimmia japonica* (HONDA), A., i, 152.
Skin diseases, elimination of sulphur and phosphorus, demineralisation of the organism, and size of the molecule elaborated in (DESGREZ and AYRIGNAC), A., ii, 104.
Slag, basic, estimation of phosphoric acid in (WESTHAUSSER; SVOBODA), A., ii, 419.
crystallised, from Hettstedt (ZAMBONINI), A., ii, 834.
Slags, estimation of sulphur in (HARTWIGSSON), A., ii, 552.
Sleep, hours of, in public schools (ACLAND), A., ii, 541.
Snake venom. See under Poison.
Snow, radioactivity of (JAUFMANN), A., ii, 663.

Soap-lyes, estimation of glycerol in (BRAUN), A., ii, 616 ; (STRAUSS), A., ii, 865.
Soaps in certain pathological conditions (KLOTZ), A., ii, 187.
estimation of moisture and free alkali in (BRAUN), A., ii, 427.
Sobrerol and its acetate (GODLEWSKY), A., i, 655.
Sodalite, origin of, in syenites (THUGUTT), A., ii, 175.
Sodalite series (WEYBERG), A., ii, 98.
Sodamide and certain of its reaction products (WINTER), A., ii, 30.
action of, on inorganic substances (EPHRAIM), A., ii, 317.
syntheses with (CLAISEN, FEYERABEND, SCHULZE, and GÄRTNER), A., i, 286.
Sodium, atomic weight of (RICHARDS and WELLS), A., ii, 450.
specific refraction of, in various alcohols (BRÜHL and SCHRÖDER), A., ii, 71.
electrolytic preparation of (CONSORTIUM FÜR ELEKTROCHEMISCHE INDUSTRIE), A., ii, 819.
specific heat and latent heat of fusion of (BERNINI), A., ii, 802.
vapour, physical properties of (BEVAN), A., ii, 819.
magnetic double refraction of (GEEST), A., ii, 621.
fluorescence of (PUCCIANTI), A., ii, 131.
liberation of hydrogen during the action of, on mercury (KAHLENBERG and SCHLUNDT), A., ii, 387.
Sodium alloys with tin (MATHEWSON), A., ii, 634.
Sodium salts of weak acids, influence of, on the solubility of sparingly soluble acids (PHILIP), T., 987 ; P., 200.
detection of (BOUGAULT), A., ii, 421.
Sodium borates, physical characters of the (BURGESS and HOLT), A., ii, 162.
*per*borate (JAUBERT and LION), A., ii, 585.
carbonate and hydroxide, specific gravity of solutions of (WEGSCHEIDER and WALTER), A., ii, 521.
chloride (*common salt*) from the region of Lake Chad (COURTET), A., ii, 173.
occurrence of boric acid in (HEFELMANN), A., ii, 652.
reaction of a mixture of calcium hydroxide and sulphur with water and (HAYWOOD), A., ii, 312.
Sodium fluoride, behaviour of, towards blood (TOYONAGA), A., ii, 332.
poisonous action of, on plants (LOEW), A., ii, 606.
hydride, heat of formation of; acidity of the hydrogen molecule (DE FORCRAND), A., ii, 372.
hydroxide, electrical conductivity and other properties of, in aqueous solution, as elucidating the mechanism of conduction (BOUSFIELD and LOWRY), A., ii, 135, 298.
titration of, in presence of sodium carbonate (NOVOTNY), A., ii, 765.
iodide, crystallisation of, from alcohols (LOEB), A., ii, 634.
mercuric iodide (DUBOIN), A., ii, 637.
nitrate (*Chili saltpetre*) containing perchlorate (PELLET and FRIBOURG), A., ii, 115.
electrolysis of fused (BOGORODSKY), A., ii, 705.
and potassium nitrate, electrical conductivity of, and of fused mixtures of the two nitrates together and with other salts (BOGORODSKY), A., ii, 669.
and thallium nitrate, equilibrium between (VAN EIJK), A., ii, 445.
action of, on native sulphides (MATUSCHEK), A., ii, 457.
as manure, function of the sodium in (WHEELER, HARTWELL, and ADAMS), A., ii, 650.
transformation of, in the soil of sugar-beet fields (STOKLASA), A., ii, 854.
analysis of (BENSEMANN), A., ii, 555.
nitrite and its decomposition by heat (RÂY), T., 178.
ammonium bismuth nitrite (BALL), T., 761 ; P., 129.
oxide, amount of, occurring naturally in urine (KRUG), A., ii, 864.
*per*oxide in organic analysis (NEUMANN and MEINERTZ), A., ii, 59 ; (KONEK VON NORWALL and ZÖHLS), A., ii, 60 ; (PRINGSHEIM and GIBSON), A., ii, 609.
use of, in platinum crucibles (LUCCHÈSE), A., ii, 119.
evaluation of (GROSSMANN), A., ii, 284.
Disodium hydrogen phosphate, reaction of, with silver nitrate (OSAKA), A., ii, 820.
Sodium sulphate, equilibrium between magnesium sulphate and (DENISON), A., ii, 456.
See also Thenardite.

Sodium alum (WADMORE), P., 150.
ferric sulphates, synthesis of (SCHARIZER), A., ii, 823.
uranyl sulphate, synthesis of, by Spring's process (OECHSNER DE CONINCK), A., ii, 254.
sulphite, anti-oxidation of solutions of (A. and L. LUMIÈRE and SEYEWETZ), A., ii, 379.
hydrogen sulphite, addition of, to ketonic compounds (STEWART), T., 185; P., 13, 78.
hyposulphite, formula of (BERNTHSEN; BAZLEN), A., ii, 240; (BINZ), A., ii, 318.
decomposition and preservation of, as anhydrous powder and in aqueous solution (A. and L. LUMIÈRE and SEYEWETZ), A., ii, 706.
action of, on metallic salts (BRUNCK), A., ii, 95.
action of sodium polysulphide on (BINZ), A., ii, 521.
evaluation of (BINZ and BERTRAM), A., ii, 282.
thiophosphate, normal, containing water of crystallisation (GLATZEL), A., ii, 318.
supercooled fusions and solutions of (YOUNG and MITCHELL) A., ii, 31.
action of, on metallic compounds in the dry way (FAKTOR), A., ii, 812.
composition and solubility of the hydrates of (YOUNG and BURKE), A., ii, 32.
reactions with (FAKTOR), A., ii, 452, 455.
*hexa*tungstate (LEONTOWITSCH), A., ii, 325.
vanadate liquors, purification of; the processes of double decomposition for the industrial separation of metals (HERRENSCHMIDT), A., ii, 41.
hypovanadovanadate (PRANDTL), A., ii, 170.
Sodium ferrocyanide, preparation of, from calcium ferrocyanide (ADMINISTRATION DER MINEN VON BUCHSWEILER), A., i, 123.
carbonylferrocyanide, action of ketone reagents on (MULLER), A., i, 757.
chromous thiocyanate (KOPPEL), A., i, 638.
Sodium, detection and estimation of, in presence of lithium by means of hydrofluosilicic acid (REICHARD), A., ii, 653.
o-**Sodoxybenzoic acid** (*sodium phenoxide-o-carboxylic acid* (DE BRUYN and TIJMSTRA), A., i, 209; (TIJMSTRA), A., i, 439.
Soils, classification and nomenclature of, according to their mineral constitution (LAGATU), A., ii, 758.
solubility of constituents of (MACH), A., ii, 54.
diffusion in humus (MINSSEN), A., ii, 758.
occurrence of fungi causing alcoholic fermentation in (HANSEN), A., ii, 548.
available plant food in (INGLE), T., 43.
origin, amount, and importance of carbon dioxide in (STOKLASA and ERNEST), A., ii, 607.
insoluble alkaline compounds formed by humic substances in (BERTHELOT), A., ii, 759.
comparison of the organic matter in different (CAMERON), A., ii, 346.
treatment of, with ether, carbon disulphide, chloroform, benzene, and hydrogen peroxide and their effect on the growth of plants (NOBBE and RICHTER), A., ii, 53.
effect of sterilisation of, on plant development (SCHULZE), A., ii, 54.
action of sulphur dioxide, zinc oxide, and zinc sulphate on (HASELHOFF), A., ii, 193.
action of the mineral constituents of plant residues soluble in water on (KRAWKOFF), A., ii, 605.
absorptive power of, for bone and mineral superphosphates (MONTANARI), A., ii, 759.
injurious effect of an excess of lime applied to (SUZUKI), A., ii, 347.
changes in the nitrogen in (LÖHNIS), A., ii, 854.
experiments on the accumulation and utilisation of atmospheric nitrogen in (VOORHEES and LIPMAN), A., ii, 477.
new apparatus for determining the ammonia-absorption power of (WOHLTMANN and SCHNEIDER), A., ii, 649.
denitrification of (AMPOLA), A., ii, 194.
nitrification and denitrification in arable (LÖHNIS), A., ii, 109.
in and about Halle, radioactive properties of (SCHENK), A., ii, 432.
Hessian, lime requirements of (DIETRICH), A., ii, 114.
black, of Legienen, Rössel, in East Prussia (BLANCK), A., ii, 54.

Soils, North Carolina, nitrifying power of typical (WITHERS and FRAPS), A., ii, 111.
of sugar-beet fields, transformations of sodium nitrate in (STOKLASA), A., ii, 854.
bacteriological investigation of (EHRENBERG), A., ii, 750.
and sub-soils, mechanical analysis of, by centrifugal action (KILROE), A., ii, 68.
mineralogical analysis of (DUMONT), A., ii, 485.
physico-chemical analysis of (LAGATU), A., ii, 557.
employment of dyes in the analysis of (SJOLLEMA), A., ii, 195.
estimation of the fertility and manurial requirements of (KÖNIG), A., ii, 278.
estimation of the loss by ignition in the analysis of (MEHRING), A., ii, 615.
estimation of calcium and magnesium carbonates in (MONTANARI), A., ii, 204.
estimation of organic carbon in (PETTIT and SCHAUB), A., ii, 202.
estimation of potassium in (VEITCH), A., ii, 204.
estimation of titanic acid in (PELLET and FRIBOURG), A., ii, 862.
See also Bacteria, nitrogen-fixing, Manures, and Nitrification.
Solanin and **Solanidin** (WITTMANN), A., i, 456.
Solanin from *Solanum sodomaeum*, and its derivatives and **Solanidin** (ODDO and COLOMBANO), A., i, 455.
Solanum Commersonii, cultivation of, at Verrières (Vienne, France) (LABERGERIE), A., ii, 756.
Solid solutions. See Solutions, solid.
Solid substances, vaporisation of, at the ordinary temperature (ZENGELIS), A., ii, 143.
metastable states in reactions between gaseous substances and (LEY and WIEGNER), A., i, 749.
Solids, temperatures of, when heated in one flame (BAIKOFF), A., ii, 379.
heats of solution of, in indifferent solvents (TIMOFÉEFF), A., ii, 679.
velocity of solution of (BRUNER and TOLLOCZKO), A., ii, 806.
in powder or in a granular form, apparatus for the determination of the density of (v. WROCHEM), A., ii, 506.
Solubility, osmosis, and narcosis, theories on (TRAUBE), A., ii, 13.
as a measure of the change of isodynamic hydrazones (ROBERTSON), T., 1298; P., 181.
Solubility in mixtures of solvents, determination of (HERZ and KNOCH), A., ii, 510, 709.
influence of one substance on the, of another substance (HOFFMANN and LANGBECK), A., ii, 374.
of salts in mixtures of alcohol and water (FLECKENSTEIN), A., ii, 688.
of double salts in water (RIMBACH and GREWE), A., ii, 375.
of analogous double salts (KOPPEL, WETZEL, and GUMPERZ), A., ii, 689.
of some sparingly soluble salts in water at 18° (KOHLRAUSCH), A., ii, 152.
influence of various sodium salts on the (PHILIP), T., 987; P., 200.
Solubility curve, breaks in the (MEYERHOFFER), A., ii, 13.
phenomena observed when the plait curve meets the (SMITS), A., ii, 234, 684.
Solution and pseudo-solution (LINDER and PICTON), T., 1906; P., 240.
contribution to the theory of (MARTIN), A., ii, 234.
hydrate theory of, application of, to electrolytes (LOWRY), A., ii, 686.
heat of. See under Thermochemistry.
velocity of, of solid substances (BRUNER and TOLLOCZKO), A., ii, 806.
Solutions, aqueous, ionisation and the coefficient of magnetisation of (MESLIN), A., ii, 433.
concentrated (VAN LAAR), A., ii, 234.
solid (KORTE), T., 1503; P., 229.
lecture experiment to demonstrate the (BECKMANN), A., ii, 694.
and isomorphism (BRUNI and TROVANELLI), A., ii, 153.
vapour tension of (SPERANSKY; KÜSTER and DAHMER), A., ii, 230.
supersaturated, velocity of crystallisation of (LEENHARDT), A., ii, 630.
Solvent and fluorescence (KAUFFMANN and BEISSWENGER), A., ii, 131.
liquid hydrogen sulphide as a (ANTONY and MAGRI), A., ii, 446.
Solvents, influence of, on the rotation of optically active compounds (PATTERSON and TAYLOR), T., 122; P., 15; (PATTERSON), T., 313; P., 78.
of high boiling point, application of the microscopic method of molecular weight determination to (BARGER and EWINS), T., 1756; P., 250.
conducting, halogen hydrides as (STEELE; STEELE, MCINTOSH, and ARCHIBALD), A., ii, 222.
mixed, association in (BARGER), T., 1042; P., 204.

Soot, Manchester, constituents of (KNECHT), A., ii, 703.
Sorbieritol from mountain-ash berries, and its acetyl derivative and acetals (BERTRAND), A., i, 21.
synthesis and chemical nature of (BERTRAND), A., i, 21.
Sonesite, a native iron-nickel alloy from British Columbia (HOFFMANN), A., ii, 328.
Spangolite from Arizona (LINDGREN and HILLEBRAND), A., ii, 97.
Sparteine, constitution of (MOUREU and VALEUR), A., i, 716.
oxidation of (WILLSTÄTTER and MARX), A., i, 544.
action of ethyl iodide on (MOUREU and VALEUR), A., i, 609.
action of methyl iodide on (MOUREU and VALEUR), A., i, 608, 717.
reactions of (REICHARD), A., ii, 563.
Sparteine, hydroxy- (AHRENS), A., i, 917.
Sparteine molecule, symmetry of the (MOUREU and VALEUR), A., i, 659.
Spartyrine and its additive salts (WILLSTÄTTER and MARX), A., i, 544.
Specific gravity. See Density.
apparatus. See Pyknometer.
heat. See under Thermochemistry.
volume. See Volume.
Spectra. See under Photochemistry.
Spirits, estimation of higher alcohols in (SCHIDROWITZ and KAYE), A., ii, 486; (BECKMANN), A., ii, 768.
See also Brandies.
Spleen and pancreas (PRYM), A., ii, 404.
of oxen, occurrence of guanase in (JONES), A., ii, 644.
Splenic enzyme. See Enzyme.
Spring water. See under Water.
Squamatic acid and its barium salt (HESSE), A., i, 138.
Staining reaction of dead and living protoplasm (RŮŽIČKA), A., ii, 405.
Stannates and **Stannichlorides.** See under Tin.
Starch, cause of the presence of abnormal amounts of, in bruised apples (WARCOLLIER), A., ii, 753.
circumstances which influence the physical condition of (WOLFF and FERNBACH), A., i, 510.
decomposition products from, by hydrolysis with hydrochloric acid (RÖSSING), A., i, 684.
influence of acid, steam pressure, and time on the production of dextrose and dextrin in the inversion of, by mineral acids (PAROW), A., i, 684.
Starch, influence of liquefaction of, on its transformation by saccharifying diastases (FERNBACH and WOLFF), A., i, 624.
reversion of amylocellulose into (ROUX), A., i, 262.
diastasic coagulation of (FERNBACH and WOLFF), A., i, 164, 312.
analogy between, coagulated by amylocoagulase and pea starch (FERNBACH and WOLFF), A., i, 574.
digestion of, in infants (CORLETTE), A., ii, 466.
acetyl derivatives of (CROSS, BEVAN, and TRAQUAIR), A., i, 511.
Starches, artificial, reversion of (ROUX), A., i, 328.
saccharification of, by malt (ROUX), A., i, 624.
Starch coagulum and amylocellulose, separation of (WOLFF), A., ii, 866.
Starch paste, constitution, saccharification, and reversion of (MAQUENNE and ROUX), A., i, 511.
Starch syrup, use of fermentation methods for the analysis of (v. RAUMER), A., ii, 618.
Steapsin (FROMME), A., ii, 732.
Stearic acid, formation of, by the electrolytic reduction of oleic acid (PETERSEN), A., i, 678.
β-bromo- and *β-mono-* and *αβ-di*-hydroxy- (PONZIO), A., i, 736.
di-, *tetra-*, and *hexa*-hydroxy-, from the oil from the seeds of *Gynocardia odorata* (POWER and BARROWCLIFF), T., 899; P., 177.
Steel. See under Iron.
Stereoisomerides, behaviour of, in the organism (WOHLGEMUTH), A., ii, 543.
Sterigmatocystis nigra and oxalic acid (CHARPENTIER), A., ii, 749.
See also *Aspergillus niger*.
Stibine. See Antimony hydride.
Stictaic acid and its salts (HESSE), A., i, 140.
4-Stilbazole and its additive salts (FRIEDLÄNDER), A., i, 232.
3′-amino-6′-hydroxy- and 3′-nitro-, and its additive salts (FRIEDLÄNDER), A., i, 819.
4-Stilbazoline and its additive salts (FRIEDLÄNDER), A., i, 818.
Stilbazyl alcohol and its additive salts (DÜRING), A., i, 233.
Stilbene (*s-diphenylethylene*) derivatives, synthesis of (WISLICENUS and WREN), A., i, 284.
*tetra*chloro-*p-di*hydroxy-, bromide and chloride of, and their diacetates (ZINCKE and WAGNER), A., i, 343.

Stilbene (*s-diphenylethylene*) *di-p*-hydroxy-, and its acetyl derivative, and their bromo- and chloro-compounds (ZINCKE and MÜNCH), A., i, 55.
Stilbeneacetone and anhydride of the dihydroxy-compound (v. LIPPMANN and FRITSCH), A., i, 443.
Stilbene-quinone and **-quinhydrone** (ZINCKE and MÜNCH), A., i, 55.
Stimulation, chemical and electrical (MATHEWS), A., i, 845.
Stimulins (LEISHMAN), A., ii, 844.
Stoïchiometrical laws and the atomic theory (HENRY), A., ii, 81.
Stoïchiometry, fundamental laws of, and the atomic theory (NASINI), A., ii, 514.
Stomach, behaviour of salt solutions in the (OTTO), A., ii, 403 ; (PFEIFFER), A., ii, 837.
extent to which fats are decomposed in the (ZINSSER), A., ii, 732.
fat-hydrolysing enzyme from the mucous membrane of the (FROMME), A., ii, 731.
formation of hydrochloric acid in the (BENRATH and SACHS), A., ii, 731.
See also Digestion.
Stomach contents, examination of (WILLCOX), A., ii, 837.
Stovaine. See Methylethyldimethylaminomethylcarbinol benzoate hydrochloride.
Strontium-ammonium (ROEDERER), A., ii, 455.
Strontium carbonate, alkaline reaction of (BLUM), A., ii, 163.
chromate, artificial production of (DE SCHULTEN), A., ii, 175.
Strontium and barium, detection of small quantities of (BLUM), A., ii, 204.
barium, and calcium, estimation of, in presence of one another (BRILL), A., ii, 522.
Strontium-haidingerite and **-monetite**, artificial production of (DE SCHULTEN), A., ii, 174.
Strychnine, thermochemistry of (BERTHELOT and GAUDECHON), A., ii, 301, 441.
action of bromine on (BECKURTS), A., i, 918.
oxide and its additive salts (PICTET and MATTISSON), A., i, 816.
salts, dissociation of, determined by the rotatory power (MINGUIN), A., ii, 130.
separation of, from brucine (HOWARD), A., ii, 779.
Strychnine, chloro-derivatives of, and their acyl derivatives, and *tetra*chloro-*di*nitro- (MINUNNI and FERRULLI), A., i, 229 ; (CORONEDI), A., i, 230.
*iso***Strychnine** and its additive salts (BACOVESCU and PICTET), A., i, 815.
Sturgeon and dog, nitrogen distribution in the livers of (WAKEMAN), A., ii, 467.
Styrene (*cinnamene*), *di*chloro-, its amino-, azo-, and nitro-derivatives (DINESMANN), A., i, 645.
β-nitro-, action of potassium cyanide on (HOLLEMAN), A., i, 42.
Styrene oxide (FOURNEAU and TIFFENEAU), A., i, 591.
Styrolene, *ω*-nitro-. See Styrene, *β*-nitro-.
***β*-Styryl-*β*-ethylpropiophenone** and its dibromide and oxime (KOHLER), A., i, 359.
Styryl-*α*- and **-*β*-naphthathiazoles** and their amino-, chloro-, hydroxy-, and nitro-derivatives and their acetyl compounds (RUPE and SCHWARZ), A., i, 83.
Suberic acid, *αζ-di*amino-, synthesis of, and its salts, hydrochloride, and phenylcarbimide derivative (NEUBERG and NEIMANN), A., i, 687.
Substance $(C_4H_6N_2)_n$, from the action of hydrogen cyanide on aminoacetone hydrochloride (GABRIEL), A., i, 265.
$C_4H_2O_2Br_2$ and $C_5H_4O_4Br_2$, from the action of bromine on bromoisopyromucic acid (CHAVANNE), A., i, 77.
$C_5H_2O_7N_4$, from *aci*dinitroethyl alcohol (DUDEN and PONNDORF), A., i, 558.
$C_7H_{14}O_3$, and its oxime and diacetyl derivative, from acetaldehyde and formylisobutyraldol (WEIS), A., i, 17 ; (SCHACHNER), A., i, 171.
$C_7H_4OS_2$, from the diazotisation of *o*-aminophenol (FRIEDLÄNDER and MAUTHNER), A., i, 103.
$C_7H_7O_3Br$, from dibromo-2:6-dimethyl-4-pyrone (FEIST and BAUM), A., i, 915.
$C_7H_9O_4N$, from the action of hydroxylamine on ethyl mono- and diacetylmalonates (PALAZZO and SALVO ; PALAZZO and CARAPELLE), A., i, 858.
$C_7H_{17}O_2N_3$, from dimethylaminomethyl alcohol and nitromethane (HENRY), A., i, 609.
$C_8H_{14}O$, from *γ*-coniceine and nitrous acid (v. BRAUN and STEINDORFF), A., i, 813.
$C_8H_{14}O_3$, from the methylation of dihydroxydimethyleneacetone (WILLSTÄTTER and PUMMERER), A., i, 457.

Substance, $C_8H_7O_2N$, from *p*-aminobenzoic acid and formaldehyde (H. and A. v. EULER), A., ii, 343.

$C_8H_8O_3N_2$, and its potassium derivative, from the action of ethyl hydroxyethylacetoacetate and ammonia on ethyl cyanoacetate (GUARESCHI), A., i, 823.

C_8H_9ON, from formaldehyde and formanilide (ORLOFF), A., i, 189.

$C_9H_6O_3$ (two), from isopyromucic acid (CHAVANNE), A., i, 77.

$C_9H_8ON_2$, from 5-hydroxy-1-phenyl-4-methyl-5-triazole (DIMROTH and LETSCHE), A., i, 100.

$C_9H_{17}O_2N$, from aminoethyl ether and acetylacetone (KNORR and MEYER), A., i, 748.

$C_{10}H_8N_4$, from piperidine hydrochloride and sodium nitrohydroxylaminate (ANGELI and CASTELLANA), A., i, 491.

$C_{10}H_{20}O$, from the action of dilute sulphuric acid on propionepinacone (KOHN), A., i, 167.

$C_{10}H_{15}O_6N_3$, from terpinene nitrosite and nitric acid (AMENOMIYA), A., i, 603.

$C_{10}H_{15}O_6N_7$, from glycoluril and formaldehyde, and its additive compounds with inorganic salts (BEHREND, MEYER, and RUSCHE), A., i, 419.

$C_{11}H_{20}O_2$, and $C_{12}H_{22}O_4$, from the oxidation of octaglycol isobutyrate (LESCH and MICHEL), A., i, 403.

$C_{11}H_9O_2N$, from citrodianilidic acid (BERTRAM), A., i, 466.

$C_{11}H_{10}O_2N_2$, and its benzoyl derivative, from the trioxime of 3-nitrosophenylmethylpyrrole (ANGELICO), A., i, 660.

$C_{11}H_{11}O_2N_3$, from the trioxime of 3-nitrosophenylmethylpyrrole (ANGELICO), A., i, 660.

$C_{11}H_{14}O_4N_2$, from pilocarpoic acid (PINNER), A., i, 463.

$C_{11}H_{13}ON_3$, from 1-methyl-*p*-dichloroisopropylbenzene (AUWERS), A., i, 434.

$C_{11}H_{18}O_{10}N_6,H_2O$, from glyoxal and carbamide (BEHREND, MEYER, and RUSCHE), A., i, 419.

$C_{12}H_{18}O$, and $C_{13}H_{20}O$, and their dibromides, from the action of magnesium alkyl iodides on hydroxymethylenecamphor (FORSTER and JUDD), T., 369; P., 116.

$C_{12}H_{24}O_2$, from the aldol, $C_6H_{14}O_2$ (MUNK), A., i, 559.

Substance, $C_{12}H_{11}ON$, from formaldehyde and formyl-β-naphthylamine (ORLOFF), A., i, 190.

$C_{12}H_{13}ON_3$, and its benzoyl derivative, from benzeneazo-2:5-dimethylpyrrole (CASTELLANA), A., i, 941.

$C_{12}H_{15}O_6Na$, $C_{14}H_{19}O_6Na$, and $C_{15}H_{21}O_6Na$, from dimethylpyrone and sodiomalonates (VORLÄNDER and WEISSHEIMER), A., i, 794.

$C_{12}H_{22}O_4N_2$, from the oxidation of sparteine (WILLSTÄTTER and MARX), A., i, 545.

$C_{12}H_{22}O_5N_4$, from protoalbumose (LEVENE), A., i, 252.

$C_{13}H_{14}N_2$, and its additive salts, from aminoacetone and benzaldehyde (ALEXANDER), A., i, 92.

$C_{13}H_{19}O_3N$, from ethyl α-cyanocinnamate and magnesium isopropyl bromide (KOHLER and REIMER), A., i, 348.

$C_{13}H_{21}ON$, from dimethylamine dimethylcamphoformolaminecarboxylate (TINGLE and HOFFMANN), A., i, 800.

$C_{13}H_{25}O_2N_3$, from 1-hydroxymethylpiperidine and nitromethane (HENRY), A., i, 609.

$C_{14}H_6O_6$, and its potassium salt and diacetyl derivative, from the oxidation of quinolcarboxylic acid (JUCH), A., i, 701.

$C_{14}H_{10}O_2Br_2$, and $C_{15}H_{12}O_2Br_2$, from *m*-bromoanisole and benzoyl chloride (DIELS and BUNZL), A., i, 432.

$C_{14}H_{11}ON_5$ (two), from 5-hydroxy-1-phenyltriazole and diazobenzene chloride (DIMROTH and EBERHARDT), A., i, 100.

$C_{14}H_{12}O_2N_2$, and its isomeride, from the phenylhydrazone of dehydracetic acid (STOLLÉ), A., i, 838.

$C_{14}H_{13}O_3N$, from the action of nitric acid on diphenylethane (KONOWALOFF and JATZEWITSCH), A., i, 763.

$C_{14}H_{13}O_6N$, $C_{15}H_{15}O_6N$, and $C_{16}H_{17}O_6N$, from the condensation of ethyl phenylglycinoacetate with oxalic esters in presence of alkyl oxides (DE MOUILPIED), T., 447; P., 64.

$C_{14}H_{27}O_3N_3$, from the action of formaldehyde on $C_{13}H_{25}O_2N_3$ (HENRY), A., i, 609.

$C_{15}H_{16}O_3$, and its oxime and phenylhydrazone, from salicylideneacetylacetone (KNOEVENAGEL and ARNOT), A., i, 65.

$C_{15}H_{11}ON_3$, from hydrogen cyanide and phenylcarbimide (DIECKMANN and KÄMMERER), A., i, 874.

Substance, $C_{15}H_{12}O_3Br_2$, from the hydrolysis of 5:5′-dibromo-2:2′-diethoxybenzophenone (DIELS and BUNZL), A., i, 432.

$C_{15}H_{14}O_3N_2$, and its salts and acetyl and bromo-derivatives, from amino-orcinol monomethyl ether (HENRICH and SCHIERENBERG), A., i, 93.

$C_{15}H_{16}O_3N_2$, and its salts and acetyl derivatives, from amino-orcinol monomethyl ether (HENRICH and SCHIERENBERG), A., i, 93.

$C_{15}H_{21}ON$, and its acetyl derivative, from meconinemethyl isopropyl ketone (LUKSCH), A., i, 69.

$C_{15}H_{24}O_4N_2$, from the oxidation of sparteine (WILLSTÄTTER and MARX), A., i, 545.

$C_{15}H_{23}ON$, from diethylamine diethylcamphoformolaminecarboxylate (TINGLE and HOFFMANN), A., i, 800.

$C_{15}H_{27}O_2N_3$, from isonitrosoacetophenone, formaldehyde, and piperidine (DUDEN, BOCK, and REID), A., i, 569.

$C_{15}H_{14}ON_2S$, from formaldehyde and thiocarbanilide (OPPERMANN), A., i, 770.

$C_{16}H_{10}O_6$, from the oxidation of homohydroxysalicylic acid (DUREGGER), A., i, 702.

$C_{16}H_{17}N$, and its salts, from cinnamaldehyde and methylaniline (ZINCKE and WÜRKER), A., i, 243.

$C_{16}H_{14}O_6N_2$, from the action of hydrazine hydrate on dehydracetic acid (STOLLÉ), A., i, 839.

$C_{16}H_{18}O_3N_2$, and its isonitroso-derivative, from ethyl acetoacetate and phenylmethylpyrazolone (STOLLÉ), A., i, 838.

$C_{16}H_{18}O_6N_{12}$, and $C_{18}H_{18}O_6N_{12}$, from glycoluril and formaldehyde (BEHREND, MEYER, and RUSCHE), A., i, 419.

$C_{16}H_{19}O_2N$, and its semicarbazone, from the action of sodium and amyl formate on propyl benzoyl-δ-aminobutyl ketone (v. BRAUN and STEINDORFF), A., i, 812.

$C_{16}H_{20}O_8N_2$, from the electrolysis of ethyl sodiocyanomalonate (ULPIANI and RODANO), A., i, 260.

$C_{16}H_{21}O_4N_3$, from the action of aniline on $C_{10}H_{15}O_6N_3$ (AMENOMIYA), A., i, 603.

$C_{17}H_{14}O_4N_4$, from 1-phenyl-5-triazolone-4-carboxylic acid and methyl alcohol (DIMROTH and EBERHARDT), A., i, 100.

Substance, $C_{18}H_{12}O_3$, from the action of phenylhydrazine on the substance, $C_{33}H_{22}O_7$ (SCHARWIN), A., i, 448.

$C_{18}H_4O_6Br_8$, and its acyl derivaties, from tetrabromo-*o*-benzoquinone (JACKSON and CARLTON), A., i, 908.

$C_{18}H_{17}O_{11}N$, from tannin, ethyl carbamate, and formaldehyde (VOSWINKEL), A., i, 805.

$(C_{19}H_{18}O_3)_x$, from dimethylthebainemethine methiodide (KNORR and PSCHORR), A., i, 814.

$C_{19}H_{22}N_2$, and its salts, from dinitrophenylpyridinium chloride and methylaniline (ZINCKE and WÜRKER), A., i, 241.

$C_{19}H_{20}N_2Br_2$, and its salts, from dinitrophenylpyridinium chloride and methyl-*p*-bromoaniline (ZINCKE and WÜRKER), A., i, 242.

$C_{19}H_{24}O_4N_2$, from camphoroxalic acid and benzamide (TINGLE and HOFFMANN), A., i, 800.

$C_{20}H_{12}O_3$, from the oxidation of 3:5-dihydroxytritanolactone (v. LIEBIG), A., i, 783.

$C_{20}H_{12}O_3$, from the oxidation of ββ-dinaphthol (BÜNZLY and DECKER), A., i, 884.

$C_{20}H_{36}O_{19}N_{12}$, from glyoxal and carbamide (BEHREND, MEYER, and RUSCHE), A., i, 419.

$C_{20}H_{23}O_3NI$, from the action of methyl iodide on the sodium derivative of 5-hydroxy-1-phenyl-4-methyltriazole (DIMROTH and LETSCHE), A., i, 100.

$C_{21}H_{20}O_4$, and $C_{21}H_{18}O_4Br_4$, from $C_{21}H_{24}O_4$ and its tetrabromo-derivative (FABINYI and SZEKI), A., i, 591.

$C_{21}H_{24}O_4$, and its tetra-acyl and tetrabromo derivatives, from catechol and acetone (FABINYI and SZEKI), A., i, 591.

$C_{21}H_{24}O_6$, and its hexa-acyl and dibromo-derivatives, from pyrogallol and acetone (FABINYI and SZEKI), A., i, 888.

$C_{21}H_{17}ON_5$, and $C_{21}H_{18}ON_5Cl$, from the action of phenylhydrazine on the lactone of dichloroacetylanthranilic acid (GÄRTNER), A., i, 130.

$C_{21}H_{17}N_3S_2$, from the action of thionyl chloride on thiobenzamide (TOCHTERMANN), A., i, 596.

$C_{22}H_{18}O_4$, from the reduction of 2:4(or 2:6)-dihydroxydeoxybenzoin (FINZI), A., i, 907.

$C_{22}H_{26}O$, from the oxidation of dimethylstyrylcarbinol (KOHLER and HERITAGE), A., i, 207.

Substance, $C_{23}H_{20}O_3$, from methyl cinnamate, magnesium phenyl bromide, and benzoyl chloride (KOHLER and HERITAGE), A., i, 207.

$C_{24}H_{14}O_3$, from naphthalaldehydic acid and acenaphthenone (WIECHOWSKI), A., i, 709.

$C_{24}H_{30}O_4$, and its tetra-acetyl derivative, from catechol and methyl ethyl ketone (FABINYI and SZEKI), A., i, 591.

$C_{24}H_{30}O_6$, and its hexa-acetyl derivative, from pyrogallol and methyl ethyl ketone (FABINYI and SZEKI), A., i, 889.

$C_{21}H_{44}O$, from β-chiclalban (TSCHIRCH and SCHERESCHEWSKI), A., i, 685.

$C_{24}H_{23}O_4N$, and its acetyl derivative, from *o*-methoxybenzaldehyde and glycine (ERLENMEYER and BADE), A., i, 131.

$C_{25}H_{20}O_6$, from the action of phenylpropiolyl chloride on ethyl sodiomalonate (RUHEMANN and MERRIMAN), T., 1395; P., 225.

$C_{27}H_{36}O_4$, from catechol and diethyl ketone (FABINYI and SZEKI), A., i, 592.

$C_{28}H_{30}O_4$, from 3:5-dihydroxytritanolactone (v. LIEBIG), A., i, 782.

$C_{29}H_{16}N_4$, and $C_{34}H_{21}N_3$, from flavinduline (SACHS and BARGELLINI), A., i, 488.

$C_{29}H_{27}O_3$, from the reduction of *p*-hydroxydeoxybenzoin (WEISL), A., i, 905.

$C_{31}H_{32}O_3$, from the reduction of 4-hydroxy-3-methyldeoxybenzoin (BLAU), A., i, 906.

$C_{31}H_{21}O_2N_3$, $C_{31}H_{22}O_2N_2$, $C_{32}H_{24}O_3N_2$, and $C_{33}H_{26}O_4N_2$, from flavinduline (SACHS and BARGELLINI), A., i, 488.

$C_{32}H_{26}O_6$, from the reduction of γ-hydroxy-α-keto-βγ-diphenylbutyric acid (ERLENMEYER), A., i, 784.

$C_{32}H_{30}O_5N_2$, from ethyl benzoylacetate and anthranilic acid (v. NIEMENTOWSKI), A., i, 612.

$C_{33}H_{22}O_7$, from acetic anhydride, sodium acetate, and phenanthraquinone (SCHARWIN), A., i, 448.

$C_{38}H_{46}O_3$, from the reduction of cinnamylidenecamphor (RUPE and FRISELL), A., i, 222.

$C_{40}H_{30}O_7$, from 3:5-dihydroxytritanic acid (v. LIEBIG), A., i, 782.

Substitution, laws of, in aromatic compounds (FLÜRSCHEIM), A., i, 614.

influence of, in the components on the equilibrium of binary solutions (KREMANN), A., i, 270; ii, 77.

Substitution of hydrogen for atoms or groups of atoms in aromatic compounds during reduction (BLANKSMA), A., i, 761.

of hydroxyl by bromine (PERKIN and SIMONSEN), T., 855; P., 188.

Succinaldehydebisphenylhydrazones (HENLE), A., i, 490.

Succinic acid, salts, solubility of, in water (CANTONI and DIOTALEVI), A., i, 115.

potassium hydrogen salt, variations in the crystallisation of, due to the presence of other metallic compounds (CAMERON), A., i, 259.

Succinic acid, ethyl ester, action of allyl iodide on, in presence of zinc (KASANSKY), A., i, 320.

action of magnesium phenyl bromide on (ACREE), A., i, 216.

Succinic acid, amino-. See Aspartic acid.

*μ-di*amino-, ethyl ester, and its diacetyl and dibenzylidene derivatives and condensation products with ethyl acetoacetate and acetylacetone (TAFEL and STERN), A., i, 417.

aminohydroxy-, synthesis of (NEUBERG and SILBERMANN), A., i, 418.

mono- and *di*-bromo-, esters, action of pyridine and quinoline bases on (DUBREUIL), A., i, 14.

*di*cyano-, ethyl ester (ENGLER and MEYER), A., i, 631.

*iso***Succinic acid.** See Methylmalonic acid.

Succinimide, copper derivative (LEY), A., ii, 524.

compounds of, with amines (TSCHUGAEFF), A., i, 865.

*iso***Succinylguanidine** (GERNGROSS), A., i, 942.

Succinylsuccinic acid, ethyl ester, condensation of, with acetamidine (BOGERT and DOX), A., i, 949.

condensation of, with guanidine (BOGERT and DOX), A., i, 841.

Sucrose (*saccharose, cane sugar*), osmotic pressure and freezing points of solutions of (MORSE and FRAZER), A., ii, 575.

quantitative hydrolysis of (PFYL and LINNE), A., ii, 770.

hydrolysis of, by *d*- and *l*-camphor-β-sulphonic acids (CALDWELL), A., i, 22.

influence of metals on the hydrolysis of (VONDRÁČEK), A., ii, 151.

velocity of enzymatic inversion of (HERZOG), A., i, 164.

methylation of (PURDIE and IRVINE), T., 1028; P., 215.

Sucrose (*saccharose, cane sugar*), polarimetric estimation of (WATTS and TEMPANY), A., ii, 656.
estimation of, in presence of dextrose and lævulose (H. and L. PELLET; DUPONT), A., ii, 558; (H. PELLET), A., ii, 770.
Sugar, formation of, from proteid (LÜTHJE), A., ii, 99.
analysis, potassium oxalate as a lead precipitant in (SAWYER), A., ii, 210.
tests for, in urine (PFLÜGER SCHÖNDORFF, and WENZEL), A., ii, 45.
use of the orcinol reaction for the detection of, in urine (MANN), A., ii, 487.
estimation of, by Fehling's solution (LAVALLE), A., ii, 558.
direct estimation of, in beet, by Pellet's water process (H. and L. PELLETT), A., ii, 210.
estimation of, in urine (BILINSKI), A., ii, 289.
crystallisable, influence of invert sugar on the estimation of, with reference to the yield of refined sugar (CARIMANTRAND), A., ii, 657.
See also Maple sugar.
Sugar cane, influence of sodium salts in the soil on the composition of (PRINSEN-GEERLIGS), A., ii, 346.
Sugar factories, movement of nitrogenous compounds and pentoses in the products of (KOPETZKI), A., ii, 194.
estimation of betaine in the products of (STANĚK), A., ii, 562.
estimation of the harmful nitrogen in the products of (ANDRLÍK), A., ii, 616.
Sugar residues, mutual replacement of, in hydrazones (VOTOČEK and VONDRÁČEK), A., i, 377.
Sugar solutions, osmotic pressure of, in mixtures of alcohol and water (BARLOW), P., 242.
dialysing power of, and action of inorganic salts on (BERTI), A., ii, 682.
Sugar syrup, influence of the harmful nitrogen on the purity of (ANDRLÍK and URBAN), A., ii, 617.
Sugars, action of inorganic compounds on the rotation of (GROSSMANN), A., i, 415, 861; (RIMBACH and WEBER), A., i, 416.
mutarotation of the (JUNGIUS), A., i, 573.
showing mutarotation, transformation of (TANRET), A., i, 327.
Sugars, change in the optical activity of solutions of, during oxidation by hydrogen peroxide in presence of ferrous sulphate (MORRELL and BELLARS), T., 281; P., 79.
action of Bacteria on (SEGIN), A., ii, 341.
action of secondary *as*-hydrazines on (OFNER), A., i, 90, 158, 937; (NEUBERG), A., i, 90.
assimilation limits of (BLUMENTHAL), A., ii, 333.
some compounds of, with guanidine (MORRELL and BELLARS), A., i, 577.
nitrophenylhydrazones of, and their separation thereby (ALBERDA VAN EKENSTEIN and BLANKSMA), A., i, 474.
spectroscopic and colour reactions of important (PINOFF), A., i, 865.
Sugars, aldehydic, reaction of (BERG), A., i, 21.
of *Convolvulus Scammonia* (VOTOČEK and VONDRÁČEK), A., i, 74.
of certain glucosides, nature of the (TER MEULEN), A., i, 803.
reducing, estimation of, volumetrically (LING and RENDLE), A., ii, 487.
estimation of, in presence of starch and soluble starch (WOLFF), A., ii, 558.
See also Carbohydrates.
Sulphammonium and its relation to nitrogen sulphide (RUFF and GEISEL), A., ii, 699.
Sulphanilic acid. See Aniline-*p*-sulphonic acid.
Sulphates. See under Sulphur.
Sulphazilate, Fremy's, constitution of (HANTZSCH), A., ii, 313, 699; (DIVERS), A., ii, 449, 517.
Sulphides. See under Sulphur.
Sulphinic acids, aromatic, behaviour of, towards mercuric salts (PETERS) A., i, 640.
Sulphoacetic acid (STILLICH), A., i, 318.
Sulphobenzide-*o*-carboxylic acid. See Diphenylsulphoxide-*o*-carboxylic acid.
2-Sulphobenzoic acid, 2- and 6-amino-, and sulphoimide of (HOLLEMAN), A., i, 595.
4-Sulphobenzoic acid, 2-amino-, and diamide of (HOLLEMAN), A., i, 595.
Sulpho*iso*butyric acid and its salts, esters, and chlorides (MOLL VAN CHARANTE), A., i, 16.
Sulphomelide and *aci*-**Sulphomelide** and their salts (HANTZSCH and STUER), A., ii, 313.

ω-Sulphomethylanthranilic acid (Badische Anilin- & Soda-Fabrik), A., i, 130.
sodium hydrogen salt (Badische Anilin- & Soda-Fabrik), A., i, 340.
ω-Sulphomethyldiphenylamine and its salts and nitrile (Badische Anilin- & Soda-Fabrik), A., i, 769.
ω-Sulphomethylethylaniline, sodium salt (Badische Anilin- & Soda-Fabrik), A., i, 340.
ω-Sulphomethyl-*p*-toluidine, sodium salt (Badische Anilin- & Soda-Fabrik), A., i, 340.
Sulphonal, physiological activity of acid and basic derivatives of (Posner), A., i, 852.
Sulphonalcarboxylic acid (Posner), A., i, 852.
Sulphonamides, *N*-halogen derivatives of (Chattaway), T., 145; P., 7.
***o*-Sulphon-*mono*- and *-di*-chloroamidobenzoic acids** (Chattaway), T., 1883; P., 284.
Sulphones, formation of (Posner and Tscharno), A., i, 279.
pharmacology of (Hildebrandt), A., ii, 744.
Sulphonic acids, action of phenylcarbimide on (Vallée), A., i, 771.
containing nitrogen, constitution of (Hantzsch), A., ii, 313; (Divers), A., ii, 449.
Sulphothiocarbodiglycollic acid and its ethyl ester and acid sodium salt (Holmberg), A., i, 325.
Sulphothiocarboglycollic acid. See Xanthoacetic acid.
Sulphur, atomic weight of, deduced from its density (Guye), A., ii, 442.
quadrivalent, an asymmetric synthesis of (Smiles), T., 450; P., 92.
combustion of, in the calorimetric bomb (Giran), A., ii, 76, 505.
amorphous, nature of, and influence of foreign substances on the phenomena of supercooling observed when melted sulphur is suddenly chilled (Smith), A., ii, 382; (Smith, Holmes, and Hall), A., ii, 580.
plastic, rate of crystallisation of (Kastle and Kelley), A., ii, 21.
sublimed, and flowers of sulphur (Domergue), A., ii, 82.
two liquid states of, Sλ and Sμ, and their transition point (Smith), A., ii, 382; (Smith, Holmes, and Hall), A., ii, 580.
solubility of, in benzyl chloride and some properties of these solutions (v. Boguski), A., ii, 312.
Sulphur, action of alkali hydroxides on (Pomeranz), A., ii, 698.
action of, on benzene in presence of aluminium chloride (Boeseken), A., i, 583.
action of, on carbon tetrabromide (v. Bartal), A., ii, 704.
and calcium hydroxide, reaction of a mixture of, with water and salt (Haywood), A., ii, 312.
Sulphur compounds, heats of combustion and formation of (Thomsen), A., ii, 574.
source of, in animals (Wohlgemuth), A., ii, 182.
Sulphur chlorides, action of, on benzene in presence of aluminium chloride (Boeseken), A., i, 583.
*tetra*chloride and its compounds (Ruff), A., ii, 22.
Sulphuryl chloride, action of ammonia on (Stuer), A., i, 579; (Hantzsch and Stuer), A., ii, 312.
action of, on mixed magnesium organic compounds (Oddo), A., i, 400.
Thionyl fluoride, new formation of (Ruff and Thiel), A., ii, 160.
Sulphur hydride. See Hydrogen sulphide.
Sulphides, native, action of sodium nitrate on (Matuschek), A., ii, 457.
phosphorescent (Vanino and Gans), A., ii, 248.
action of very low temperatures on the phosphorescence of certain (Le Roux), A., ii, 131.
Polysulphides (Küster and Heberlein), A., ii, 156; (Küster), A., ii, 387.
periodic phenomena during the electrolysis of (Küster and Koelichen), A., ii, 698.
Sulphur *di*oxide, boiling point of (Gibbs), A., ii, 570.
solubility of, in water (Harpf), A., ii, 383.
liquid, apparatus for preparing (Krécsey), A., ii, 312.
action of, on hydrogen sulphide (Lang and Carson), P., 158.
Sulphur *tri*oxide, measurements of equilibrium in the contact process of preparing (Bodenstein and Pohl), A., ii, 581.
use of arsenic oxide in the catalysis of (Berl), A., ii, 315.
Sulphurous acid, estimation of, iodometrically, in alkaline solution (Ruff and Jeroch), A., ii, 200; (Rupp), A., ii, 479.

Sulphur:—
Sulphites, oxidation of, by iodine in alkaline solution (ASHLEY), A., ii, 351, 609.
Sulphuric acid, apparatus for the preparation of (FRANKFORTER and FRARY), A., ii, 514.
contact method for the manufacture of (KÜSTER, FRANKE, and GEIBEL), A., ii, 82; (LUCAS), A., ii, 701.
preparation of, by the contact process; lecture experiment (LANG), A., ii, 810.
lead chamber process, theory of the (RASCHIG), A., ii, 23, 700; (DIVERS), A., ii, 83; (LUNGE), A., ii, 157.
preparation of standard solutions of (NORTH and BLAKEY), A., ii, 417.
refractive indices of, at different concentrations (VELEY and MANLEY), A., ii, 781.
dilute, cause of the spontaneous depression of the cathode potential in the electrolysis of (TAFEL), A., ii, 223; (TAFEL and EMMERT), A., ii, 569.
behaviour of anodes of iridium, platinum, and rhodium in the electrolysis of dilute (WESTHAVER), A., ii, 226.
conductivity of, at different temperatures (FELIPE), A., ii, 669.
density and expansion of, in aqueous solution (DOMKE and BEIN), A., ii, 157.
methods employed in preparing the tables of specific gravity of (FERGUSON), A., ii, 632.
action of, on organic acids (OECHSNER DE CONINCK and RAYNAUD), A., i, 321.
action of, on mercuric iodide (DITTE), A., ii, 391.
explanation of the action of strong, on metals (VAN DEVENTER), A., ii, 383.
properties of mixtures of nitric acid and (SAPOSHNIKOFF), A., ii, 583.
compounds of, with hydroferrocyanic acid (CHRÉTIEN), A., i, 578.
estimation of, by means of barium chromate (ANDREWS), A., ii, 115.
estimation of, by means of benzidine (v. KNORRE), A., ii, 351.
estimation of, in vegetable products (FRAPS), A., ii, 59.
estimation of combined, in waters (BLACHER and KOERBER), A., ii, 552.

Sulphur:—
Sulphuric acid, separation of, from hydrofluoric acid (EHRENFELD), A., ii, 417.
Sulphates, cryoscopy of the (COLSON), A., ii, 255.
reduction of (BRÜCKNER), A., ii, 516.
complexity of dissolved (COLSON), A., ii, 34.
Hyposulphurous acid, constitution of (BAUMANN, THESMAR, and FROSSARD; REINKING, DEHNEL, and LABHARDT), A., i, 261; (BERNTHSEN; BAZLEN), A., ii, 240; (BINZ), A., ii, 318.
Hyposulphites (BAZLEN), A., ii, 240.
preparation of (BILLY), A., ii, 318.
preparation of stable, dry (BADISCHE ANILIN- & SODA-FABRIK), A., ii, 814.
constitution of (PRUD'HOMME), A., ii, 157.
of aromatic bases (A. and L. LUMIÈRE and SEYEWETZ), A., i, 157.
analysis of solutions of (ORLOFF), A., ii, 200.
Permonosulphuric acid, Caro's, formula of (PRICE), P., 299.
Persulphuric acid, catalytic phenomena in the preparation of (PETRENKO), A., ii, 23.
Persulphates, electrolytic preparation of (CONSORTIUM FÜR ELEKTROCHEMISCHE INDUSTRIE & E. MÜLLER), A., ii, 83.
use of, for quantitative separations (v. KNORRE), A., ii, 285.
action of, on haloids (DITTRICH and BOLLENBACH), A., ii, 239.
Thiosulphuric acid, separation of sulphur from (BILTZ and GAHL), A., ii, 24.
Thiosulphate solutions, time interval before precipitation is observed in (GAILLARD), A., ii, 241.
Trithionates, reduction of, to sulphites by arsenite and stannite (GUTMANN), A., ii, 813.
Tetrathionates, reduction of, by arsenite and stannite (GUTMANN), A., ii, 384.
Polythionic acids, formation of (LANG and CARSON), P., 159.
Sulphur organic compound in dogs' urine (NEUBERG and GROSSER), A., ii, 739.
with gold (HERRMANN), A., i, 733.
Sulphur, some sources of error in estimations of (PATTINSON and DUNN), A., ii, 199.

Sulphur, estimation of, by aid of sodium peroxide (NEUMANN and MEINERTZ), A., ii, 59; (DUBOIS), A., ii, 609.
estimation of, in coal (BENDER), A., ii, 281; (BRUNCK), A., ii, 762.
estimation of, in liquid fuel and in petroleum (GOETZL), A., ii, 761.
estimation of, in foods, fæces, and urine (DUBOIS), A., ii, 609.
estimation of, in iron and steel. See under Iron.
estimation of, in iron ores, slags, and lime (HARTWIGSSON), A., ii, 552.
estimation of, in organic substances (SADTLER), A., ii, 760.
estimation of, in pyrites (PATTINSON), A., ii, 199; (LUNGE), A., ii, 350; (v. KNORRE), A., ii, 351; (DENNSTEDT and HASSLER), A., ii, 761.
estimation of, in burnt pyrites (JENE), A., ii, 350; (GOTTLIEB), A., ii, 552.
separation of, from thiosulphuric acid (BILTZ and GAHL), A., ii, 24.
Sulphuryl chloride. See under Sulphur.
Sumalbans and **Sumalbaresinols**, α-, β-, and γ- (TSCHIRCH and MÜLLER), A., i, 453.
Superphosphates. See under Phosphorus.
Suprarenine. See Epinephrine.
Surface tension of aqueous solutions of fatty acids (DRUCKER), A., ii, 680.
of inorganic salt solutions (FORCH), A., ii, 681.
of some organic liquids (BOLLE and GUYE), A., ii, 233.
Surface waters. See under Water.
Surgical operations, influence of, on carbohydrate metabolism (PFLÜGER, SCHÖNDORFF, and WENZEL), A., ii, 44.
Suspensions, conditions of stability of certain (GIOLITTI), A., ii, 823.
Sycotypus, inorganic constituents of the liver of (MENDEL and BRADLEY), A., ii, 737.
Synthesis by means of the silent electric discharge (COLLIE), T., 1540; P., 201.
asymmetric, studies in (MCKENZIE), T., 1373; P., 224.
Syrups, influence of the decomposition products from the hydrolysis of starch by hydrochloric acid on the technical value of (RÖSSING), A., i, 684.

T.

Tachyhydrite, limits of existence of (VAN'T HOFF and LICHTENSTEIN), A., ii, 262.
Tanacetone. See Thujone.
Tannic acid, use of, in the estimation of alumina (DIVINE), A., ii, 205.
valuation of (WILLIAMS), A., ii, 772.
Tannin, constitution of (NIERENSTEIN), A., i, 914.
condensation products of, with formaldehyde and carbamide or carbamates (VOSWINKEL), A., i, 805.
presence of dextrose in solutions of (NOVÉ), A., ii, 210.
methylated (HERZIG and TSCHERNE), A., i, 354.
Tannins producing a "bloom" on leather (NIERENSTEIN), A., i, 365, 805.
the carbonyl group as tannophore in (NIERENSTEIN), A., i, 805.
Tanning materials, analysis of, with exfoliated alumina (WISLICENUS), A., ii, 363; (PAESSLER), A., ii, 492.
Tantalum, occurrence of (SCHILLING), A., ii, 537.
preparation and properties of (v. BOLTON), A., ii, 258.
purification of (SIEMENS & HALSKE AKT.-GES.), A., ii, 96.
temperature-coefficient of the resistance of (STREINTZ), A., ii, 432.
hardness of hammered (v. BOLTON), A., ii, 259, 718.
absorption of hydrogen by (v. PIRANI), A., ii, 718.
Tantalum salts (SMITH, HALL, PENNINGTON, and BALKE), A., ii, 828.
Tantalum fluoride, double salts of, with the alkali fluorides and with bases (BALKE), A., ii, 719.
Pertantalates (BALKE), A., ii, 720.
Tantalum, qualitative reactions for (MELIKOFF and ELTSCHANINOFF), A., ii, 358.
Tap, new fractionating (v. BARTAL), A., ii, 631.
for use with alkaline liquids (LASSAR-COHN), A., ii, 631.
Tarconine methiodide and its relations to cotarnine and hydrocotarnine (BRUNS), A., i, 370.
Tartaric acid, salts, solubility of, in water (CANTONI and ZACHODER), A., i, 14, 633.
cobalt and nickel salts, electrolysis of (ROOT), A., ii, 208.
potassium hydrogen salt (*cream of tartar*), detection and estimation of lead in (L. and J. GADAIS), A., ii, 357.
potassium and thallium salts, isomorphous mixtures of (HERBETTE), A., i, 566.

Tartaric acid, sodium salt, effervescing (*"effervescing citrate of magnesia"*), testing (BARONI and GUIDI), A., ii, 355.
thallium salt, hydrated (HERBETTE), A., i, 566.
Tartaric acid, ethyl ester, rotation of, in chloroform (PATTERSON), T., 313; P., 78.
menthyl ester, rotation and solution-volume of (PATTERSON and TAYLOR), T., 37, 124; P., 15.
Tartranil, action of phosphorus pentachloride on (OKADA), A., i, 875.
Taurocholeic acid from ox bile (GULLBRING), A., ii, 737.
Taurocholic acid, crystallised, preparation of (HAMMARSTEN), A., i, 33; (BANG), A., i, 750.
Tautomeric compounds, phenylcarbimide as a reagent for determining the constitution of (MICHAEL), A., i, 195; (GOLDSCHMIDT), A., i, 340.
Tautomerides, enol-keto-, ultra-violet absorption spectra of (BALY and DESCH), T., 766; P., 84.
Tautometric substances, dilatometric measurements of (GIOLITTI), A., ii, 12.
Tellurates and **Telluric acid.** See under **Tellurium**.
Tellurium, radioactive. See Radio-tellurium.
electrochemical equivalent of (GALLO), A., ii, 242.
cathodic pulverisation of (MÜLLER and LUCAS), A., ii, 672.
action of hydrogen peroxide on (GUTBIER and RESENSCHECK), A., ii, 24.
colloidal (GUTBIER), A., ii, 24.
brown and blue modifications of (PAAL and KOCH), A., ii, 158.
Tellurium *di*chloride, absorption spectra of (FRIEDERICHS), A., ii, 782.
*hexa*fluoride (PRIDEAUX), P., 238.
Telluric acid, estimation of, iodometrically (GUTBIER and RESENSCHECK), A., ii, 116.
Tellurates, chemistry of the (HUTCHINS), A., ii, 701.
Tellurium, estimation of (GUTBIER), A., ii, 116; (GUTBIER and WAGENKNECHT), A., ii, 201.
Tellurium minerals from Colorado (HILLEBRAND), A., ii, 97, 723.
Temperature. See under Thermochemistry.
Tengerite (?) from Llano Co., Texas (HIDDEN), A., ii, 535.
Terbium (FEIT), A., ii, 251.
"Terbium," isolation of (URBAIN), A., ii, 35, 711; (DE BOISBAUDRAN), A., ii, 89.
Terephthalaldehyde-green (CLAUSSNER), A., i, 791.
Terpane, *α*- and *β*-2:8-*di*hydroxy- (RUPE and SCHLOCHOFF), A., i, 450.
d-**Terpene**, $C_{10}H_{16}$, from methyl bornyl xanthate (TSCHUGAEFF), A., i, 73.
Terpene (b.p. 261–262°) from the white Peru balsam from Honduras (HARTWICH and HELLSTRÖM), A., i, 454.
Terpenes and ethereal oils (WALLACH). A., i, 147, 709; (WALLACH and KÖHLER), A., i, 450.
synthesis of (PERKIN and PICKLES), T., 639, 655; P., 130, 131; (MATSUBARA and PERKIN), T., 661; P., 131; (KAY and PERKIN), T., 1066; P., 216; (PERKIN and TATTERSALL), T., 1083; P., 217.
Terpenic compounds, distribution of, among the different organs of an annual plant (CHARABOT and LALOUE), A., ii, 549.
Terpinene, constitution of (AMENOMIYA), A., i, 802.
nitrosite, reactions of (AMENOMIYA), A., i, 603.
Test-tube, new form of (SCHAER), A., ii, 514.
Tetanic toxins. See Toxins.
Tetanus and quinine (VINCENT), A., ii, 104.
Tetra-acetylellagic acid (NIERENSTEIN), A., i, 365, 805.
Tetra-alkylarsonium bases (MANNHEIM), A., i, 758.
Tetra-azophenolsulphonic acid (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 725.
Tetrabenzenesulphon-*m*- and -*p*-**phenylenediamines** (HINSBERG and KESSLER), A., i, 339.
N-**Tetrabenzyl***di***aminophenazonium chloride** (FISCHER and VEIEL), A., i, 246.
Tetrabenzylethylene and *tetra*nitro- (MANCHOT and KRISCHE), A., i, 142.
Tetrabenzylideneflavindogenide (EIJKMAN, BERGEMA, and HENRARD), A., i, 360.
Tetrabenzyltetramethylthiopinacone (MANCHOT and KRISCHE), A., i, 142.
Tetradymite from Colorado (HILLEBRAND), A., ii, 723.
9:10-Tetraethyl*di***aminodiphenyl-9:10-diphenyldihydroanthracene** and its isomeride (HALLER and GUYOT), A., i, 270; (GUYOT and CATEL), A., i, 517.
1:3:5:5-Tetraethylbarbituric acid (FISCHER and DILTHEY), A., i, 36.
Tetraethylrhodamine and its hydrochloride and anhydrous base (NOELTING and DZIEWOŃSKI), A., i, 935.

Tetraethylsuccinic acid and its anhydride and methyl hydrogen ester (J. and A. P. WALKER), T., 961; P., 210.

Tetraethylthiolquinol and its compound with lead acetate and dibenzoate (SAMMIS), A., i, 797.

Tetraethylthiolquinone, preparation of (SAMMIS), A., i, 797.

Tetrahydrobenzene. See *cyclo*Hexene.

Tetrahydrocarveol and its phenylurethane (WALLACH and KÖHLER), A., i, 451.

Tetrahydro-β-collidine and its additive salts, oxalate, and hydrogen tartrate (KOENIGS and BERNHART), A., i, 824.

Tetrahydrocuminaldehyde and its oxime and semicarbazone and **Tetrahydrocumic acid** (WALLACH), A., i, 710.

Tetrahydrocuminol and its phenylurethane (WALBAUM and HÜTHIG), A., i, 604.

Tetrahydrocymene (BRUNEL), A., i, 197.

Tetrahydroeucarvone and its oxime and semicarbazone (WALLACH and KÖHLER), A., i, 451.

Tetrahydroeucarvylamine and its benzoyl derivative (WALLACH and KÖHLER), A., i, 451.

Tetrahydrofuran-1-mono- and **-1:1-dicarboxylic acids,** 3-hydroxy- (TRAUBE), A., i, 13.

Tetrahydrolimonenediphenyldisulphone (POSNER and TSCHARNO), A., i, 279.

Tetrahydronaphthalenephenylsulphone (POSNER and TSCHARNO), A., i, 279.

ar-**Tetrahydro-α-naphthylamine,** azocolouring matters from (MORGAN and RICHARDS), A., i, 616.

Δ²-Tetrahydro*iso*phthalic acid and its salts, anhydride, and anilic acid (PERKIN and PICKLES), T., 302; P., 75.

Δ³-Tetrahydro*iso*phthalic acid, formation of (GOODWIN and PERKIN), T., 851; P., 187.

and its oxidation and transformation into the Δ²-acid (PERKIN and PICKLES), T., 307; P., 76.

Δ⁴-Tetrahydro*iso*phthalic acids, *cis*- and *trans*- (PERKIN and PICKLES), T., 310; P., 76.

cis-**Δ³-Tetrahydrophthalic anhydride** and *di*bromo- (ABBATI and DE BERNARDINIS), A., i, 599.

Tetrahydroquinoline, action of alkyl iodide on (WEDEKIND), A., i, 234.

conversion of, into 2-methyldihydroindole (v. BRAUN and STEINDORFF), A., i, 156.

bromo-, and its acetyl derivative and their salts (KUNCKELL and THEOPOLD), A., i, 297.

Tetrahydro*iso*quinoline-2-acetic acid, ethyl ester, hydriodide of (WEDEKIND), A., i, 235.

Tetrahydroquinoline-1-carboxylic acid and 6:8-*di*nitro-, methyl and ethyl esters of (VAN DORP), A., i, 81.

Tetrahydrotetrazine, *diiso*nitroso-, ammonium and metallic derivatives (WIELAND), A., i, 421.

Δ⁶-Tetrahydro-*o*-toluic acid and its oxidation and ethyl ester (KAY and PERKIN), T., 1072.

Tetrahydro-*m*-toluic acids, **Δ¹-** and **Δ⁶-,** and their ethyl esters, and oxidation, and reaction of the esters with magnesium methyl iodide (PERKIN and TATTERSALL), T., 1085.

Δ¹-Tetrahydro-*p*-toluic acid and its ethyl ester (PERKIN and PICKLES), T., 645; P., 130.

3:4:3′:4′-Tetramethoxychalkone, 2′-hydroxy-, and its acetyl derivative (v. KOSTANECKI and RUDSE), A., i, 367.

7:8:3′:4′-Tetramethoxy-flavanone and *iso*nitroso- and **-flavonol** and its acetyl derivative (v. KOSTANECKI and RUDSE), A., i, 367.

αγ-Tetramethyl*di*amino-β-amino- and **-β-nitro-propanes** (DUDEN, BOCK, and REID), A., i, 568.

Tetramethyl*di*amino-benzhydrol and **-ditolylhydrol,** condensation of, with aromatic bases in presence of hydrochloric or sulphuric acid (REITZENSTEIN and RUNGE), A., i, 301.

Tetramethyl*di*aminobenzophenone (v. GEORGIEVICS), A., i, 357.

Tetramethyl-2:2′-*di*aminobenzophenone (v. BAEYER), A., i, 766.

αδ-Tetramethyl*di*amino-Δβ-butene (WILLSTÄTTER and v. SCHMAEDEL), A., i, 514.

Tetramethyl*di*aminodimethylethylcarbinyl benzoate. See Alypin.

9:10-Tetramethyl*di*aminodiphenyl-9:10-diphenyldihydroanthracene and its isomeride (HALLER and GUYOT), A., ii, 270.

9:10-Tetramethyl*di*aminodiphenyl-9:10-diphenyl-2-methyldihydroanthracenes, *cis*- and *trans*-, and their salts (GUYOT and STAEHLING), A., i, 886.

9:10-Tetramethyl*di*-*p*-aminodiphenyl-9-phenyl-10-α-naphthyldihydroanthracene (GUYOT and STAEHLING), A., i, 887.

as-**Tetramethyl*di*aminophenyldiphenylenemethane** (GUYOT and GRANDERYE), A., i, 248.

Tetramethyl*di*aminophenyl-*m*-methyl- and **-*m*-nitro-diphenylenemethanes** (GUYOT and GRANDERYE), A., i, 248.

Tetramethyl*di*aminophenylphenylenenaphthylenemethane (GUYOT and GRANDERYE), A., i, 248.
Tetramethyl*di*aminothiobenzophenone (LAMBRECHT and WEIL), A., i, 243.
Tetramethyl*di*aminotriphenylcarbothiol and its analogue (LAMBRECHT and WEIL), A., i, 243.
Tetramethylammonium hydroxide and its hydrates (WALKER and JOHNSTON), T., 955; P., 210.
iodide mercuricyanide, supposed isomerism of (AULD and HANTZSCH), A., i, 747.
2:7:9:10-Tetramethylanthracene dihydride (LAVAUX), A., i, 698.
3:4:3′:4′-Tetramethylbenzophenone and its oxime and phenylhydrazone (BISTRZYCKI and REINTKE), A., i, 285.
3:5:3′:5′-Tetramethyl-4:4′-diphenol and its diacetate and 2-chloro-derivative and **-4:4′-diphenoquinone** (AUWERS and v. MARKOVITS), A., i, 219.
Tetramethylene-. See *cyclo*Butane-.
Tetramethylene glycol and its phenylurethane (HAMONET), A., i, 403.
Tetramethylenediamine (*putrescine*), excretion of, in a case of cystinuria (BÖDTKER), A., ii, 741.
picronolate (OTORI), A., i, 126.
Tetramethylenediaminephenylcarbimide (LOEWY and NEUBERG), A., i, 158.
aaδδ-Tetramethyl-fulgenic acid and **-fulgide** (STOBBE and LENZNER), A., 857.
2:2:7:7-Tetramethylhexamethyleneimine and its benzoyl derivative and additive salts (KONOWALOFF and WOINITSCH-SIANOSCHENSKY), A., i, 826.
Tetramethyl mannoside and **mannose** (IRVINE and MOODIE), T., 1462; P., 227.
Tetramethylmethane (*ββ-dimethylpropane*), *s-tetra*bromo- (PERKIN and SIMONSEN), T., 857; P., 189.
1:3:3:7-Tetramethyl-2-methyleneindoline and its additive salts (PLANGGER), A., i, 718.
Tetramethyl methylgalactosides (IRVINE and CAMERON), T., 902; P., 191.
Tetramethyl α- and β-methylglucosides (IRVINE and CAMERON), T., 901; P., 191.
2:6-Tetramethylpiperidine and its additive salts, methylurethane, and benzoyl derivative (FRANCHIMONT and FRIEDMANN), A., i, 80.
2:2:5:5-Tetramethylpyrrolidine and its benzoyl derivative (KONOWALOFF and WOINITSCH-SIANOSCHENSKY), A., i, 826.
Tetramethylrhodamine and its hydrochloride (NOELTING and DZIEWOŃSKI), A., i, 935.
2:2:5:5-Tetramethyltetramethyleneimine. See 2:2:5:5-Tetramethylpyrrolidine.
9:9:10:10-Tetraphenyldihydroanthracene and its derivatives (HALLER and GUYOT), A., i, 188.
3:4:5:6-Tetraphenyldihydro-1:2-diazine (JAPP and WOOD), T., 711; P., 154.
Tetraphenylenefuran (JAPP and KNOX), T., 684.
Tetraphenyl-ethane and **-ethylene** and its tetrabromo-derivative (MANCHOT and KRISCHE), A., i, 142.
aaδδ-Tetraphenyl-fulgenic acid and **-fulgide** (STOBBE and LENZNER), A., i, 857.
Tetraphenylheptacyclene (LIEBERMANN and LINDENBAUM), A., i, 523.
Tetrathiazoles, 2-imino- (YOUNG and CROOKES), P., 307.
Tetrathionic acid. See under Sulphur.
Tetrazoline, action of aldehydes, methyl iodide, and platinic chloride on (RUHEMANN and MERRIMAN), T., 1768; P., 257.
Thalassin, the poison of sea anemones (RICHET), A., ii, 746.
Thalictrum aquilegifolium, glucoside from the leaves of (VAN ITALLIE), A., ii, 852.
Thallium, valency stages of, and the oxidation power of oxygen, mutual relationships of the (SPENCER and ABEGG), A., ii, 369.
Thallium alloys with gold (LEVIN), A., ii, 463.
with magnesium (GRUBE), A., ii, 636.
Thallium salts, anodic decomposition during the electrolysis of (BOSE), A., ii, 299.
Thallium *para*molybdate (JUNIUS), A., ii, 825.
nitrate, equilibria of, with potassium, silver, and sodium nitrates (VAN EIJK), A., ii, 444.
Thallous salts, isomorphism of, with potassium salts (STORTENBEKER), A., ii, 390.
nitrate and ammonium nitrate, mixed crystals of (WALLERANT), A., ii, 380.
action of, on certain natural silicates (STEIGER; CLARKE), A., ii, 707.
Thallium diethyl chloride (SHUKOFF), A., i, 759.
Thaollus salts. See under Thallium.

Thebaine, constitution and reactions of (FREUND), A., i, 918; (PSCHORR), A., i, 920; (KNORR and PSCHORR), A., i, 922.
reduction of (PSCHORR), A., i, 920.
derivatives (FREUND), A., i, 918.
Thebainol (PSCHORR), A., i, 921.
Thebainone from codeinone (KNORR), A., i, 922.
and its derivatives (PSCHORR), A., i, 920.
decomposition products of (KNORR and PSCHORR), A., i, 922.
Thebaol, synthetical base from, and its behaviour towards reagents which decompose methylmorphimethine (KNORR), A., i, 813.
Thenardite from the region of Lake Chad (COURTET), A., ii, 173.
See also Sodium sulphate.
Theobromine, barium salt, compound of, with sodium salicylate. See Barutine.
Theophylline, 8-amino-, and its alkyl and aryl derivatives (BOEHRINGER & SÖHNE), A., i, 230.
THERMOCHEMISTRY:—
Thermochemical rules, relating to the possibility and prognostication of reactions (BERTHELOT), A., ii, 76.
studies (LAGERLÖF), A., ii, 76, 677; (THOMSEN), A., ii, 231, 435, 571, 801; (BERTHELOT), A., ii, 504.
Thermochemistry, criticism of Clarke's new law in (PATTEN and MOTT), A., ii, 11.
of phenylhydrazones (LANDRIEU), A., ii, 628.
Thermodynamic potential and its application to problems of chemical equilibrium (VAN LAAR), A., ii, 683.
and osmotic pressure (VAN LAAR), A., ii, 234, 374.
Heat evolution and the relation between the logarithmic temperature constant (PLOTNIKOFF), A., ii, 376, 571; (AUERBACH), A., ii, 571.
radiations, absorptive power of metallic oxides and sulphides occurring naturally for (KÖNIGSBERGER and REICHENHEIM), A., ii, 624.
Thermal capacity and free energy (TREVOR), A., ii, 372; (BELL), A., ii, 434.
of mixtures (TIMOFÉEFF), A., ii, 678.
phenomena, experimental demonstrations of, developed in phosphorescent substances (DE HEEN), A., ii, 434.
THERMOCHEMISTRY:—
Calorimetry, elimination of thermometer lag and casual loss of heat in (RICHARDS, HENDERSON, and FORBES), A., ii, 677.
Calorimetric methods, relative value of (THOMSEN), A., ii, 231, 435, 571, 801; (BERTHELOT), A., ii, 504; (LAGERLÖF), A., ii, 677.
Temperature, dependence of free energy on (TREVOR), A., ii, 372.
relation of the specific heat of crystalline substances to (BOGOJAWLENSKY), A., ii, 799.
comparison of the platinum scale of, with the normal scale at temperatures between 444° and −190°, with notes on constant temperatures below the melting point of ice (TRAVERS and GWYER), A., ii, 372.
high, measurements of (GRAY), A., ii, 141.
new burners for the production of (MÉKER), A., ii, 142.
high external, effect of, on the body-temperature, respiration, and circulation in man (BOYCOTT and HALDANE), A., ii, 729.
low, action of, on colouring matters (SCHMIDLIN), A., ii, 12.
lowest, the thermo-electric junctions as a means of determining the (DEWAR), A., ii, 799.
Temperature constant, logarithmic, and heat evolution, relation between the (PLOTNIKOFF), A., ii, 376, 571; (AUERBACH), A., ii, 571.
Transition points and melting points of some salts (HÜTTNER and TAMMANN), A., ii, 229.
Calorimeters, liquid hydrogen and air, studies with (DEWAR), A., ii, 801.
Thermostats, new regulator for (DONY-HÉNAULT), A., ii, 142.
design for gas-regulators for (LOWRY), T., 1030; P., 181.
Pyrometer, new form of (KURNAKOFF), A., ii, 10.
Thermometer used in molecular weight determinations and for the measurement of small differences of temperature, modifications of (BECKMANN), A., ii, 300.
Critical constants. See Critical.
Atomic heat of solid elements (LAEMMEL), A., ii, 300.
Latent heats, determination of, at low temperatures (DEWAR), A., ii, 801.

THERMOCHEMISTRY:—
Specific heat, relation of, to atomic weight in elements and compounds (TILDEN), T., 551; P., 104.
relation of, to temperature in crystalline substances (BOGOJAWLENSKY), A., ii, 799.
determination of, at low temperatures (DEWAR), A., ii, 801.
of gases at high temperatures (HOLBORN and AUSTIN), A., ii, 228.
of liquids at low temperatures (VAN LAAR), A., ii, 148.
of solutions, determination of (MULLER and FUCHS), A., ii, 504.
Heat of combustion calculation of (LEMOULT), A., ii, 441.
calorimetric measurement of (JAEGER and V. STEINWEHR), A., ii, 677.
of atoms and molecules (HENDERSON), A., ii, 145.
of organic compounds (LAGERLÖF), A., ii, 76, 677; (THOMSEN), A., ii, 231, 435, 571, 801; (BERTHELOT), A., ii, 504.
Heats of dilution (TREVOR), A., ii, 231.
Heats of mixture, determination of some (CLARKE), A., ii, 303.
of acids (BOSE), A., ii, 801.
Heats of solution and of dilution (WEGSCHEIDER), A., ii, 505.
of solids in indifferent solvents (TIMOFÉEFF), A., ii, 679.
Heat of vaporisation of liquefied gases (MATHIAS), A., ii, 372.
Thermometer and **Thermostats**. See under Thermochemistry.
Thiazine and **oxazine dyes**, oxonium and ammonium formulæ of (HANTZSCH), A., i, 605; (KEHRMANN and DE GOTTRAU), A., i, 670.
Thiazines and **Thiazones**, relations existing between constitution and absorption spectra of the (FORMÁNEK), A., ii, 217.
Thiazoles, 2-amino- (YOUNG and CROOKES), P., 307.
Thio-acids, preparation of (BIILMANN), A., i, 625.
formation of complex salts with (ROSENHEIM and STADLER), A., i, 740.
Thiobiuretphosphoric acid and its salts (V. HEMMELMAYR), A., i, 695.
Thiocarbamide, action of phosphorus pentasulphide on (V. HEMMELMAYR), A., i, 695.
Thiocarbanilide, action of formaldehyde on (OPPERMANN), A., i, 770.
Thiocarbimides including carboxy-aromatic groups (DORAN and DIXON), T., 331; P., 77.
Thiocyanates, cyanides, and chlorides, titrimetric estimation and separation of (RUPP), A., ii, 867.
Thioformic acid (AUGER), A., i, 14.
Thioglycollamide (HOLMBERG), A., i, 324.
ψ-Thiohydantoins, disubstituted, preparation of (POZZI-ESCOT), A., i, 159.
β-Thiolactic acid (HOLMBERG), A., i, 324.
α-Thiolbutyric acid (BIILMANN), A., i, 626.
Thiol-group, joined to a benzene nucleus, intramolecular oxidation of a, by a nitro-group in the ortho-position (BLANKSMA), A., i, 425.
Thiolmalic acid and its esters and salts (ROSENHEIM and STADLER), A., i, 740.
3-Thiomethyl-1-phenyl-5-methylpyrazole (*ψ-thiopyrine*) and its salts and alkyl haloids, and 4-bromo- (MICHAELIS and HAHN), A., i, 379.
3-Thiomethyl-1-tolyl-5-methylpyrazoles. See 3-ψ-Thiotolylpyrines.
2-Thion-4-oxypyrimidine, 5-bromo-6-amino- (JOHNSON and JOHNS), A., i, 837.
2-Thion-6-oxypyrimidine, 5-amino-, *N*-benzoyl derivative of (JOHNSON), A., i, 836.
Thionyl fluoride. See under Sulphur.
Thiophen, homologues of, influence of light and heat on the chlorination and bromination of (OPOLSKI), A., i, 367.
dimercuric hydroxyacetate, Dimroth's (SCHWALBE), A., i, 656.
estimation of, colorimetrically (SCHWALBE), A., ii, 779.
2:3-Thio-1-phenyl-2:5-dimethylpyrazole (*3-thiopyrine*) and its salts and alkyl haloids (MICHAELIS and HAHN), A., i, 378.
Thiopinacones, conversion of, into hydrocarbons (MANCHOT and KRISCHE), A., i, 142.
3-Thiopyrine. See 2:3-Thio-1-phenyl-2:5-dimethylpyrazole.
ψ-Thiopyrine. See 3-Thiomethyl-1-phenyl-5-methylpyrazole.
3-Thiopyrinetrioxide. See 2:3-Trioxythio-1-phenyl-2:5-dimethylpyrazole.
Thiosulphuric acid. See under Sulphur.
Thiotolylpyrinetrioxides and **3-ψ-Thiotolylpyrines**, *o-* and *p-*, and their sulphones (MICHAELIS and BEHRENS) A., i, 380.
Thoria. See Thorium *di*oxide.

Thorianite from Ceylon (DUNSTAN and BLAKE), A., ii, 833.
supposed new radioactive element in (HAHN), A., ii, 432, 789; (RAMSAY), A., ii, 789.
Thorium, uniform nature of (MEYER and GUMPERZ), A., ii, 257; (EBERHARD), A., ii, 258; (BASKERVILLE), A., ii, 395.
inactive (BASKERVILLE and ZERBAN), A., ii, 95; (ZERBAN), A., ii, 170.
radioactivity of (ZERBAN), A., ii, 170; (SACKUR), A., ii, 368.
excited activity of (SLATER), A., ii, 368.
emanation, molecular weight of (MAKOWER), A., ii, 220.
See also Radiothorium and Thorium X.
Thorium *tetra-* and *hexa-*borides (BINET DU JASSONNEIX), A., ii, 597.
bromide and chloride, preparation and properties of (MOISSAN and MARTINSEN), A., ii, 531.
*di*oxide (*thoria*), reduction of (BINET DU JASSONNEIX), A., ii, 597; (WEDEKIND and FETZER), A., ii, 718.
estimation and separation of, from the oxides of the yttrium-cerium group (GILES), A., ii, 615.
use of organic acids for the precipitation and separation of, from cerium, lanthanum, and didymium oxides (KOLB and AHRLE), A., ii, 288.
Thorium, separation of, from the cerite earths by means of normal sodium sulphite (GROSSMANN), A., i, 326; (BATĚK), A., ii, 461.
Thorium X and the induced thorioactivity (v. LERCH), A., ii, 790.
Thujamenthene (TSCHUGAEFF), A., i, 73.
Thujamenthone, benzoyl derivative, and **Thujamenthone*iso*oxime**, hydroxy- (WALLACH and FRITZSCHE), A., i, 148.
Thujenes, **α-** and **β-** (TSCHUGAEFF), A., i, 72.
Thujone (*tanacetone*), compounds of, with aldehydes, and alkyl derivatives of (HALLER), A., i, 602.
Thujones, **α-** and **β-**, and their oximes and semicarbazones (WALLACH and BÖCKER), A., i, 147.
*iso***Thujoneamine** and its benzoyl derivative (WALLACH and FRITZSCHE), A., i, 148.
β-Thujone-oxime and its benzoyl derivative and **-*iso*oxime** (WALLACH and FRITZSCHE), A., i, 148.
*iso***Thujoneoxime** and its benzoyl derivative and hydrochloride (WALLACH and FRITSZCHE), A., i, 148.
Thujylamine and its *N*-dimethyl derivative and their salts (TSCHUGAEFF), A., i, 72.
Thujyltrimethylammonium hydroxide and salts (TSCHUGAEFF), A., i, 72.
Thujylxanthic acid, methyl ester (TSCHUGAEFF), A., i, 72.
Thuya articulata of Algeria, oil of the wood of (GRIMAL), A., i, 148.
Thymine from the products of pancreatic autolysis (KUTSCHER and LOHMANN), A., ii, 466; (LEVENE), A., ii, 732.
synthesis of (GERNGROSS), A., i, 943.
Thymol ethers, action of nitric acid on (DECKER and SOLONINA), A., i, 197.
Thymomenthene. See Tetrahydrocymene.
Thymomenthol (*hexahydrothymol*) and its isomeride and derivatives (BRUNEL), A., i, 197, 363.
Thymomenthone and its oxime and semicarbazone (BRUNEL), A., i, 363.
Thymomenthylamine and its picrate (BRUNEL), A., i, 363.
Thymonucleic acid, hydrolysis of (STEUDEL), A., i, 398.
oxidation of, with calcium permanganate (KUTSCHER and SCHENCK), A., i, 621.
Thymoquinonethymolylimide ethers (DECKER and SOLONINA), A., i, 197.
Thymotincopellidide (HILDEBRANDT), A., i, 155.
Thymotinglycuronic anhydride, *di*-chloro-, and *o*-**Thymotinpiperidide** (HILDEBRANDT), A., i, 80, 153.
Thymotin-2-methylpiperidide (HILDEBRANDT), A., i, 155.
Thymus and **Thyroid glands**. See under Gland.
Tin, physico-chemical researches on (COHEN and GOLDSCHMIDT), A., ii, 168.
electrolytic recovery of (GELSTHARP), A., ii, 168.
crystallisation of, by the electrolysis of its salts (SAPOSHNIKOFF), A., ii, 395.
copper, and oxygen, equilibrium between (HEYN and BAUER), A., ii, 169.
Tin alloys, analysis of (HOLLARD and BERTIAUX), A., ii, 67.
with aluminium, properties of (PÉCHEUX), A., ii, 526.
with copper, tensile strength of (SHEPHERD and UPTON), A., ii, 587.
with gold (VOGEL), A., ii, 640.
with magnesium (GRUBE), A., ii, 636; (KURNAKOFF and STEPANOFF), A., ii, 710.

Tin alloys with mercury (*tin amalgams*) (VAN HETEREN), A., ii, 39.
with sodium (MATHEWSON), A., ii, 634.
Stannic bromide and chloride, hydrolysis of (PFEIFFER), A., ii, 594.
chloride, action of, on organic hydroxyl compounds (ROSENHEIM and SCHNABEL), A., i, 731.
Stannichlorides of the types $M_2'SnCl_6$ and $M''SnCl_6$ (v. BIRON), A., ii, 40.
Stannates (BELLUCCI and PARRAVANO), A., ii, 40.
plumbates, and platinates, isomorphism of (BELLUCCI and PARRAVANO), A., ii, 395.
Perstannic acids and their salts (TANATAR), A., ii, 325.
Tin methyl compound (PFEIFFER and (HELLER), A., i, 123.
methyl bromide (SHUKOFF), A., i, 759.
Tin, analysis of commercial (HOLLARD and BERTIAUX), A., ii, 67; (VICTOR), A., ii, 287.
detection of stannous (BLUM), A., ii, 209.
separation of, from antimony (FISCHER), A., ii, 120; (VORTMANN and METZL), A., ii, 655.
Tin steels, constitution and properties of (GUILLET), A., ii, 527.
Tinctures, estimation of ethyl and methyl alcohols in, by the immersion refractometer (LEACH and LYTHGOE), A., ii, 655.
Tissues, animal, alcohol and acetone in (MAIGNON), A., ii, 406.
anti-catalase and philo-catalase in (BATTELLI and STERN), A., ii, 406.
universal presence of erepsin in (VERNON), A., ii, 100.
the ereptic power of, as a measure of functional capacity (VERNON), A., ii, 841.
condition of water in (DU BOIS REYMOND), A., ii, 100.
action of acids and alkalis on the staining reactions of (BETHE), A., ii, 468.
the silver reaction in (MACALLUM), A., ii, 736.
conjunctive, affinity of colouring matters for (CURTIS and LEMOULT), A., ii, 600.
intra-muscular, rate of absorption from (MELTZER and AUER), A., ii, 181.
nervous and muscular, heat value of, in guinea pigs of different ages (TRIBOT), A., ii, 542.
vegetable. See Vegetable tissues.
Titanic acid. See under Titanium.
Titanite from Urotva, Transylvania (NICOLAU), A., ii, 599.
Titanium (STÄHLER), A., ii, 40; (STÄHLER and WIRTHWEIN), A., ii, 595.
enhanced lines of, in the Fraunhoferic spectrum (LOCKYER and BAXANDALL), A., ii, 69.
Titanium ammonio-compounds (STÄHLER), A., ii, 596.
Titanium *tri*chloride, action of, on organic hydroxyl compounds (ROSENHEIM and SCHNABEL), A., i, 731.
use of, in volumetric analysis (KNECHT and HIBBERT), A., ii, 872.
*tri*haloids, hydrates of (STÄHLER), A., ii, 40; (STÄHLER and WIRTHWEIN), A., ii, 595.
oxide, separation of, from columbium oxide (HALL and SMITH), A., ii, 829.
Titanic acid, estimation of, in plant ash and soils (PELLET and FRIBOURG), A., ii, 862.
estimation of, in minerals (TRUCHOT), A., ii, 614.
Metatitanic acid, hydrated, action of silicon and tungsten on (TAMMANN), A., ii, 256.
Titanium *sesqui*sulphate and its sulphuric acid, and double salts, with ammonium and rubidium sulphates (STÄHLER), A., ii, 595.
Titanous sulphate, electrolytic preparation of (EVANS), A., ii, 169.
Titanium organic compounds (STÄHLER), A., ii, 596.
Titanium, estimation of zirconium in presence of, especially in rocks (DITTRICH and POHL), A., ii, 287.
Titanium steels, constitution and properties of (GUILLET), A., ii, 527.
Titanolivine from Val Malenco, Lombardy (BRUGNATELLI), A., ii, 176.
Titanous sulphate. See under Titanium.
Tobacco, formation of formaldehyde in the combustion of (TRILLAT), A., ii, 53.
Deli (HISSINK), A., ii, 414.
Tobaccos, apparatus for determining the differences shown by, when smoked (TÓTH), A., ii, 216.
Tobacco oil, composition and chemical and physical properties of (AMPOLA and SCURTI), A., ii, 214.
Tobacco plant, fertilising principles required by the (GIRARD and ROUSSEAUX), A., ii, 345.
m-**Tolacylnaphthalimidine** and its isomeride (WIECHOWSKI), A., i, 708.

(*Tolyl compounds, Me* = 1.)

Tolane picrate (BRUNI and TORNANI), A., i, 270.

*tetra*chloro-, *di*bromide, quinone of, and its ψ-chloride (ZINCKE and WAGNER), A., i, 343.

*tetra*chloro-*p*-*di*hydroxy-, and its dibromide and chlorobromide and their acetates, and quinhydrone (ZINCKE and WAGNER), A., i, 342.

di-*p*-hydroxy-, and its diacetyl derivative (ZINCKE and MÜNCH), A., i, 56.

o-**Tolualdehyde**, *p*-chloro-, and its semicarbazone (AUWERS and KEIL), A., i, 445.

p-**Tolualdehyde** diacetate (CHAUSSNER), A., i, 791.

p-**Tolualdehydephenylhydrazone** (LAW and PERKIN), A., i, 40.

Tolualdehydesemicarbazones, *o*- and *p*- (LAW and PERKIN), A., i, 40.

Toluene, electrolytic oxidation of (LAW and PERKIN), A., i, 40.

latent heat of evaporation of (BROWN), T., 267 ; P., 75.

action of acetylene tetrabromide and aluminium chloride on (LAVAUX), A., i, 640.

condensation of, with benzaldehyde (KLIEGL), A., i, 186.

action of chlorine on boiling (COHEN, DAWSON, and CROSLAND), T., 1034 ; P., 211.

condensation of, with diphenic anhydride (PICK), A., i, 68.

action of methylene chloride and aluminium chloride on (LAVAUX), A., i, 43.

Toluene, amino-. See Toluidines.

*di*amino-. See 2:4-Tolylenediamine.

2:4:5-*tri*amino-, brown sulphur dye from (KALLE & Co.), A., i, 540.

2-bromo-3:5-*di*nitro- and 3:5-*di*nitro-2-nitroamino-, and its salts (ZINCKE and MALKOMESIUS), A., i, 487.

3:5-*di*hydroxy-. See Orcinol.

3-iodo-6-nitro- and 6-iodo-3-nitro- (ARTMANN), A., i, 879.

m- and *p*-iodoxy-, compounds of, with mercuric bromide and chloride, and *p*-nitro-, compound of, with mercuric chloride (MASCARELLI), A., i, 869.

o-nitro-, purification of (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 639.

examination of, for the presence of small quantities of *p*-nitrotoluene (HOLLEMAN and JUNGIUS), A., ii, 864.

3:5-*di*nitro-4-nitroamino-, and its silver salt (ZINCKE and KUCHENBECKER), A., i, 488.

(*Tolyl compounds, Me* = 1.)

Tolueneazo-. See also Tolylazo-.

p-**Tolueneazodiethylaniline** and its additive salts (GNEHM and BAUER), A., i, 831.

m-**Tolueneazo-β-naphthol**, ω-hydroxy- (LANGGUTH), A., i, 593.

p-**Tolueneazophenol**, *o*- and *m*-nitro-, and the acetyl compound of the *m*-nitro- (HEWITT and MITCHELL), T., 231 ; P., 61.

Toluenediazoimide, 3:5-*di*nitro- (ZINCKE and MALKOMESIUS), A., i, 487.

o-**Toluenesulphanilide** (ULLMANN and LEHNER), A., i, 290.

m-**Toluenesulphinic acid** and its salts (TRÖGER and HILLE), A., i, 336.

p-**Toluenesulphinic acid**, mercuric salt (PETERS), A., i, 640.

Toluene-2-sulpho-alanine, -glycine, and **-glutamic acid**, 4-nitro- (SIEGFRIED), A., i, 59.

Toluenesulphonacetic acids, amides, nitriles, and thioamides of, and the chloro- and bromo-derivatives of the para-amide (TRÖGER and HILLE), A., i, 336.

Toluene-*p*-sulphonalkylamides and 2-nitro- (CHATTAWAY), T., 159.

Toluene-*o*- and -*p*-sulphonamides, separation of (BARGE & GIVANDAN), A., i, 124.

Toluenesulphonethenylaminoximes, *o*- and *p*- (TRÖGER and VOLKMER), A., i, 356.

Toluene-*o*- and -*p*-sulphon-halogen- and -alkylhalogen-amides and 2-nitro-derivatives of the *p*-compounds (CHATTAWAY), T., 151 ; P., 7.

Toluene-ω-sulphonic acid, *o*-chloro-*m*-nitro-, and its sodium salt (FARBWERKE VORM. MEISTER, LUCIUS, and BRÜNING), A., i, 124.

p-**Tolylsulphonphenyloxamide** *p*-tolylsulphonate and its acetyl and *m*-nitro-derivatives (REVERDIN and DRESEL), A., i, 51.

o-**Toluenesulphonyl bromide** and **chloride**, preparation of (ULLMANN and LEHNER), A., i, 289.

Toluene-*p*-sulphonylaminobenzeneazo-β-naphthol (MORGAN and MICKLETHWAIT), T., 1305.

Toluene-*p*-sulphonyl-*p*-nitroaniline (MORGAN and MICKLETHWAIT), T., 1303.

Toluene-*p*-sulphonyl-*p*-phenylenediamine and its derivatives (WILLSTÄTTER and PFANNENSTIEL), A., i, 669.

and its diazotisation (MORGAN and MICKLETHWAIT), T., 1303 ; P., 222.

(*Tolyl compounds, Me* = 1.)

m-**Toluic acid**, ω-hydroxy-, and its nitrile (LANGGUTH), A., i, 593.

Toluidilacetonedicarboxylic acids, *o*-, *m*-, and *p*-, and their amides and imides (SCHROETER and STASSEN), A., i, 820.

o-**Toluidine**, preparation of pure, and a method for ascertaining its purity (HOLLEMAN), A., i, 272.

influence of temperature on the action of acetyl thiocyanate on (DORAN and DIXON), T., 338 ; P., 77.

action of ethyl chloroacetate on the magnesium halogen compound of (BODROUX), A., i, 643.

4-nitro-, bromination of (MORGAN and CLAYTON), T., 951.

p-**Toluidine**, freezing points of mixtures of, with the dihydric phenols (PHILIP and SMITH), T., 1735 ; P., 255.

detection of small quantities of (HOLLEMAN), A., i, 272.

Toluidines, 2- and 3-, 5- and 6-iodo-derivatives of (ARTMANN), A., i, 878.

o- and *p*-, formyl derivatives, crystalline liquid modifications of (ORLOFF), A., i, 643.

hydrochlorides, double salts with palladous bromides and chlorides (GUTBIER), A., i, 584.

o-, *m*-, and *p*-, diazoamino-compounds from (VIGNON and SIMONET), A., i, 397.

4-*p*-Toluidinoalizarin 2-methyl ether (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 709.

p-**Toluidinobenzylacetphenone** (MAYER), A., i, 214.

m-**Toluidinocarballylic acid** (SCHROETER and STASSEN), A., i, 820.

Toluidinodiphenylmethanes, *o*- and *p*-, and their hydrochlorides (BUSCH and RINCK), A., i, 519.

o-**Toluidinoformaldehydesulphoxylic acid**, sodium salt (REINHARDT, DEHNEL, and LABHARDT), A., i, 261.

9-Tolunaphthazine. See 9-Methyl-αβ-naphthaphenazine.

p-**Toluonitrile**, reduction of (FRÉBAULT), A., i, 437.

3-amino-, acyl derivatives of, and 3-nitro- (BOGERT and HOFFMAN), A., i, 891.

p-**Toluoylacetic acid** and its ethyl ester (MARGUERY), A., i, 527.

p-**Toluoyl-*o*-benzoic acid**, isomeric methyl esters (MEYER), A., i, 134.

4-*p*-Toluoylfluorenone and its phenylhydrazone (PICK), A., i, 68.

(*Tolyl compounds, Me* = 1.)

p-**Toluquinol**, 5-bromo-3-amino-, and its acetyl derivatives and *mono*- and *di*-bromonitro- (ZINCKE and EMMERICH), A., i, 880.

ψ-**Toluquinol**, 3:6-*di*chloro-5-bromo-2-hydroxy- (ZINCKE and BUFF), A., i, 881.

p-**Toluquinone**, bromonitro-derivatives (ZINCKE and EMMERICH), A., i, 879.

Tolyl methyl ethers, *o*-, *m*-, and *p*-, dielectric constants of, dissolved in benzene and *m*-xylene (PHILIP and HAYNES), T., 1002 ; P., 200.

o-**Tolylazoformaldoxime** (BUSCH and WOLBLING), A., i, 494.

Tolylazo-. See also Tolueneazo-.

Tolylbisdinaphthaxanthen, *m*-amino- (ROBYN), A., i, 608.

Tolylcamphoformeneamine, *o*-nitro- (TINGLE and HOFFMANN), A., i, 800.

p-**Tolylcamphoformeneamine** and its acetyl derivative and **carboxylic acid** and its *p*-toluidine salt (TINGLE and HOFFMANN), A., i, 799.

m-**Tolylcamphoformeneaminecarboxylic acid** and its *m*-toluidine salt (TINGLE and HOFFMANN), A., i, 799.

Tolylcarbamic hydrazides, *o*- and *p*-, and their hydrochlorides and acetone, acetophenone, and *o*-hydroxybenzylidene compounds (BORSCHE), A., i, 306.

Tolylcarbamides, introduction of iodine into (ARTMANN), A., i, 878.

o-**Tolylcarbinol**, alkyl ethers of (FARBENFABRIKEN VORM. F. BAYER & CO.), A., i, 128.

p-**Tolyl*tri*chloromethylcarbinol** and its acetate and benzoate (DINESMANN), A., i, 645.

o-**Tolyldimethylcarbinol** (KAY and PERKIN), T., 1071.

m-**Tolyldimethylcarbinol** (PERKIN and TATTERSALL), T., 1090.

p-**Tolyldimethylcarbinol** and its phenylurethane (PERKIN and PICKLES), T., 652.

Tolyldinaphthaxanthen, *o*- and *p*-amino- (ROBYN), A., i, 608.

2:4-Tolylenediamine and its acyl derivatives and 5-bromo- (MORGAN and CLAYTON), T., 949.

N-bistoluene-*p*-sulphonyl derivative (OEHLER), A., i, 829.

4:4′-oxalyl derivative (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 249.

5-nitro-, azo-derivatives of (MORGAN and WOOTTON), T., 940 ; P., 179.

Tolylenedimethyldiamine. See Dimethyltolylenediamine.

(*Tolyl compounds, Me* = 1.)

1:2:4-Tolylenedisulphonacetonitrile (TRÖGER and HILLE), A., i, 337.

Tolylethyl alcohols, *o-* and *p-*, and their phenylurethanes (GRIGNARD), A., i, 594.

***o*-Tolylglycinoacetic acid**, preparation of (DE MOUILPIED), T., 440; P., 63.

Tolylglycollic acids. See Tolyloxyacetic acids.

***p*-Tolylhydrizinoaminomethylenecarboxylic acid**, ethyl ester and amide (BOWACK and LAPWORTH), T., 1865.

***p*-Tolylhydrizinohalogenmethylenecarboxylic acids**, ethyl esters (BOWACK and LAPWORTH), T., 1863.

***p*-Tolylidenehydrazine**, benzoyl derivative, silver compound of (STOLLÉ and MÜNCH), A., i, 94.

***o*-Tolylimino-*p*-tolyl-*p*-tolutriazine** (BUSCH and BERGMANN), A., i, 309.

3-*p*-Tolyl-6-methyl-3:4-dihydro-*β*-phenotriazine and its salts (v. WALTHER and BAMBERG), A., i, 299.

***m*-Tolyl methyl ketone**, condensation of, with naphthalaldehydic acid (WIECHOWSKI), A., i, 707.

Tolyl-2-methylpiperidide, *di*bromo- (HILDEBRANDT), A., i, 155.

1-Tolyl-5-methylpyrazoles, *o-* and *p-*, 3-chloro-, and their methiodides (MICHAELIS and BEHRENS), A., i, 380.

1-*p*-Tolyl-3-methylpyrazole-4-azobenzene and its 5-chloro-, 5-nitro-, 5-thio-, 5-thioalkyl, 5-phenylsulphone, and 5-thiobenzoate derivatives, and 5-sulphide (MICHAELIS, LEONHARDT, and WAHLE), A., i, 395.

1-*p*-Tolyl-5-methylpyrazole-4-azobenzene, 3-chloro- (MICHAELIS and BEHRENS), A., i, 397.

1-*p*-Tolyl-3-methylpyrazole-4-*p*-azotoluene and its 5-chloro- and 5-thio-derivatives (MICHAELIS, LEONHARDT, and WAHLE), A., i, 395.

1-Tolyl-5-methyl-3-pyrazolones, *o-* and *p-*, and their salts, benzoyl, and benzylidene derivatives (MICHAELIS and BEHRENS), A., i, 380.

Tolyl-5-methyl-3-pyrazolone-4-azobenzenes, 1-*o-* and -*p-*, and their salts and benzenesulphonyl derivatives (MICHAELIS and BEHRENS), A., i, 396.

1-Tolyl-2-methylpyrrolidone-2-carboxylic acids, *o-*, *m-*, and *p-*, and their esters, salts, amides, aminoximes, and nitriles (KÜHLING and FALK), A., i, 372.

***p*-Tolyl-6-methylquinolyl-8-iodonium hydroxide** and their salts (WILLGERODT), A., i, 548.

(*Tolyl compounds, Me* = 1.)

***m*-Tolyl naphthalidomethyl ketone** and its pseudo-acid, oxime, and phenylhydrazone (WIECHOWSKI), A., i, 708.

Tolylnaphthalimides, *o-*, *m-*, and *p-* (BARGELLINI), A., i, 210.

***p*-Tolylnaphthylamine-8-sulphonic acid** (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 717.

1-*p*-Tolylnaphthylamine-6- and -7-sulphonic acids (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 770.

Tolyl*iso*nitroacetonitriles, *o-*, *m-*, and *p-*, sodium derivatives (WISLICENUS and WREN), A., i, 284.

***p*-Tolyl-*m*-nitrobenzaldoxime** (PLANCHER and PICCININI), A., i, 706.

Tolylnitromethanes, *o-*, *m-*, and *p-* (WISLICENUS and WREN), A., i, 284.

Tolyloxyacetic acids (*tolylglycollic acids*) *o-*, *m-*, and *p-*, nitro-derivatives of, and 3-amino- of the para-acid (KERNOT), A., i, 286.

Tolyloxybenzoic acids, *o-* and *p-* (AKTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION), A., i, 780.

Tolyloxybenzoic acids, *o-*, *m-*, and *p-* (ULLMANN and ZLOKASOFF), A., i, 597.

***α*-*p*-Tolyloxycinnamic acid** and the action of heat on (STOERMER and BIESENBACH), A., i, 525.

***α*-*p*-Tolyloxy-*β*-phenylhydracrylic acid** (STOERMER and BIESENBACH), A., i, 525.

***p*-Tolyloxystyrene** (STOERMER and BIESENBACH), A., i, 525.

***p*-Tolylphenyl-1:3:4-oxadiazole** and its silver nitrate derivative (STOLLÉ and MÜNCH), A., i, 95.

3-Tolylpyrines, *o-* and *p-*, and their hydrochlorides and picrates (MICHAELIS and BEHRENS), A., i, 380.

3-*o-* and -*p*-Tolylrhodanic acids and their condensation with aldehydes (ANDREASCH and ZIPSER), A., i, 931; (STUCHETZ), A., i, 933.

***m*-Tolylsemicarbazide**, preparation of (FARBENFABRIKEN VORM. F. BAYER & CO.), A., i, 383, 949.

Tolylsulphon-. See Toluenesulphon-.

2-*o*-Tolylthiocarbamidoazo-*p*-toluene (BUSCH and BERGMANN), A., i, 309.

3-Tolylthiopyrines, *o-* and *p-*, and their methiodides (MICHAELIS and BEHRENS), A., i, 380.

***p*-Tolylthiosalicylic acid**, new preparation of (GOLDBERG), A., i, 59.

1-*p*-Tolyl-1:2:3-triazole, 5-hydroxy-, and its **4-carboxylic acid** (DIMROTH and STAHL), A., i, 385.

(*Tolyl compounds*, *Me* = 1.)
1-*p*-Tolyl-1:2:3-triazole-4-carboxylic acid, 5-hydroxy-, ethyl ester, and its amine salts (DIMROTH and STAHL), A., i, 385.
1-*p*-Tolyl-5-triazolone-4-carboxylic acid and its ethyl ester (DIMROTH and STAHL), A., i, 385.
Tomatoes, red colouring matters of (MONTANARI), A., i, 293.
Tombs, Egyptian, metals found in (BERTHELOT), A., ii, 164.
Topaz, alteration product of (KREJČI), A., ii, 177.
Toxic action and chemical combination as exemplified in hæmolytic sera (MUIR and BROWNING), A., ii, 107.
Toxicity of the normal intestinal contents (MAGNUS-ALSLEBEN), A., ii, 746.
Toxicological investigations, destruction of organic matters in (GRIGORÉEFF), A., ii, 354.
Toxicology, estimation of arsenic in (MAI), A., ii, 763.
Toxin-antitoxin reaction, physical chemistry of the (CRAW), A., ii, 747.
Toxins and anti-toxins (ARRHENIUS and MADSEN), A., ii, 50; (MADSEN and WALBUM; MADSEN and NOGUCHI; MADSEN), A., ii, 407.
action of (HENRI), A., ii, 237.
absorption theory of the neutralisation of, and related phenomena (BILTZ, MUCH, and SIEBERT), A., i, 495.
action of chemical oxydases on (BAUDRAN), A., ii, 632.
cholera. See under Cholera.
diphtheritic and tetanic, action of calcium permanganate on (BAUDRAN), A., ii, 407.
See also Tuberculin.
Tragacanth and acacia, comparative viscosity of the simple and mixed mucilages (WHITE), A., i, 685.
Transition points. See under Thermochemistry.
Transport numbers. See under Electrochemistry.
Trees, evergreen, carbohydrate reserves of (LECLERC DU SABLON), A., ii, 605.
Trehalase, presence of, in Fungi (BOURQUELOT and HÉRISSEY), A., ii, 113.
Tremors, action of formic acid on (CLÉMENT), A., ii, 408.
Triacetic acid, lactone of, and its phenylhydrazones and *O*-ethers and bromo- and its *O*-methyl ether (TAMBURELLO), A., i, 258.
Triacetin, action of hydrogen bromide or hydrogen chloride on (ACEÑA), A., i, 7.
Trialkylaminoguanidines, preparation of (BUSCH), A., i, 307.
Trialkylbarbituric acids, imino- (CONRAD and ZART), A., i, 752.
Trianilino-bromo- and **-chloro-dimaleic anhydride dianils** (SALMONY and SIMONIS), A., i, 632.
Trianisylcarbinols, *m*- and *p*-, and their salts (v. BAEYER), A., i, 358.
1:2:4-Triazole, alkyl derivatives of (PELLIZZARI and SOLDI), A., i, 672.
Triazoles, *endo*imino- (MERCK), A., i, 949.
Triboluminescence (TSCHUGAEFF), A., ii, 132; (GUINCHANT), A., ii, 366; (GERNEZ), A., ii, 430, 431; (WEBSTER), A., ii, 786.
and crystalloluminescence (TRAUTZ and SCHORIGIN), A., ii, 494; (TRAUTZ), A., ii, 662.
in the acridine series (MORGAN), A., ii, 786.
Tricarballylanilic acid, esters and anilide of (BERTRAM), A., i, 466.
Tricarballylic acid and cyano-, dimethyl ethyl ester (KNOEVENAGEL and MOTTEK), A., i, 61.
Tricarballylmonoanilidic acid, aniline salt (BERTRAM), A., i, 466.
Tri-*p*-chlorobenzoyladrenaline (STOLZ), A., i, 106.
Tricyanocarbamide and its trisodium salt (HANTZSCH, BAUER, and HOFMANN), A., i, 330; (HANTZSCH), A., i, 331.
Tricyanotricarboxylic acid, ethyl ester (HANTZSCH and BAUER), A., i, 330.
Tridecoic acid, α-bromo- and α-hydroxy- (LE SUEUR), T., 1905.
Tridecoic aldehyde and its polymeride, oxime, and semicarbazone (LE SUEUR), T., 1903.
Tridecyl alcohol, **Tridecylamine** and its salts, and **Tridecylcarbamic acid**, methyl ester (KLARFELD), A., i, 166.
Tridecyl cyanide, α-hydroxy-, and its hydrolysis (LE SUEUR), T., 1904.
2:4:6-Tridinaphaxanthylbenzene, 1:3:5-*tri*hydroxy-, and its triacetyl derivative (FOSSE and ROBYN), A., i, 607.
Triethylbenzene, aluminium chloride compound, combination of, with hydrogen chloride and with tri-isopropylbenzene hydrochloride (GUSTAVSON), A., i, 334, 697.
1:3:3-Triethyl-3-ethylideneindoline and its picrate (PLANCHER and CARRASCO), A., i, 719.
1:3:7-Triethylxanthine, preparation of (SCARLAT), A., i, 160.
Tri*iso*hexylamine and its salts (SABATIER and SENDERENS), A., i, 268.

1:2:3-Trimethoxybenzene, 5-hydroxy-. See Antiarol.

3:4:5-Trimethoxy-benzylamine and its sulphate and platinichloride and **-benzylmethylamine** (HEFFTER and CAPELLMANN), A., i, 877.

3:3′:4′-Trimethoxybenzylidenecoumaranone (BLOM and TAMBOR), A., i, 916.

Trimethoxybenzyltrimethylammonium salts (HEFFTER and CAPELLMANN), A., i, 878.

3:4:4′-Trimethoxychalkone and its acetyl derivative (v. KOSTANECKI and NITKOWSKI), A., i, 915.

4:3′:4′-Trimethoxychalkone,2′-hydroxy-, and its acetyl derivative (v. KOSTANECKI and SCHREIBER), A., i, 808.

3:3′:4′-Trimethoxy-flavanone and *iso*nitroso-, and **-flavonol** and its sodium and acetyl derivatives (v. KOSTANECKI and NITKOWSKI), A., i, 915.

5:7:4-Trimethoxy-flavanone, 3:6:8-*tri*bromo-, and **-flavone,** 6:8-*di*bromo- (BREGER and v. KOSTANECKI), A., i, 366.

7:8:4′-Trimethoxy-flavanone and *iso*nitroso-, and **-flavonol** and its acetyl derivative (v. KOSTANECKI and SCHREIBER), A., i, 808.

Trimethoxyphenanthrenecarboxylic acid (KNORR and PSCHORR), A., i, 814.

Trimethoxyvinylphenanthrene (KNORR and PSCHORR), A., i, 814.

Trimethylacetoacetaldehyde and its copper salt (COUTURIER and VIGNON), A., i, 571.

"Trimethyladipic acid" (NOYES and DOUGHTY), A., i, 321.

Trimethylamine, preparation of, by the methylation of ammonia (ESCHWEILER; KOEPPEN), A., i, 328.
additive compounds of (HANTZSCH and GRAF), A., i, 575.

1:3:5-Trimethylbenzene. See Mesitylene.

1:2:3-Trimethylbenziminazole-2-ol, 5-bromo- and 5-chloro-, and their iodides (FISCHER and MOUSON), A., i, 246.

Trimethylbrazilone phenylhydrazone (HERZIG and POLLAK), A., i, 605.

αaβ-Trimethylbutyric acid, **βγ-*di*bromo-,** and the action of heat on (BLAISE and COURTOT), A., i, 563.

αββ-Trimethylbutyrolactone (NOYES), A., i, 322.

Trimethylcarbinyl acetate, ***tri*bromo-** (PERKIN and SIMONSEN), T., 857; P., 189.

Trimethylcetrol (HESSE), A., i, 139.

Trimethylcomenic acid, hydroxy-, ethyl ester, action of hydroxylamine and α-benzylhydroxylamine on (AZZARELLO), A., i, 916.

Trimethylcreatinine platinichloride (KORNDÖRFER), A., i, 152.

αβγ-Trimethylcrotonic acid, γ-cyano-, ethyl ester (ROGERSON and THORPE), T., 1702.

Trimethylene-. See *cyclo*Propane-.

Trimethylene glycol, monoethylin of (BOUVEAULT and BLANC), A., i, 12.

Trimethyleneasparagine (H. and A. v. EULER), A., ii, 343.

Trimethylenecarboxylic acid. See *cyclo*Propanecarboxylic acid.

Trimethylenediamine and its *N*-dibromo- and -dichloro-derivatives and their *s*-diacyl compounds (CHRIT-WAY), T., 388; P., 61.

Trimethylene-trisulphone and **-disulphone sulphide** (PETERS), A., i, 625.

αβγ-Trimethylglutaconic acid and its silver salt, anhydride, and ester, and α-cyano-, ethyl ester (ROGERSON and THORPE), T., 1702; P., 239.

1:4:5-Trimethylglyoxaline and 2-bromo-, and their additive salts (JOWETT), T., 405; P., 116.

2:6:6-Trimethyl-4-*cyclo*hexanol-1-carboxylic acids, isomeric, and their lactones (MERLING, WELDE, and SKITA), A., i, 349.

2:6:6-Trimethyl-Δ²-*cyclo*hexene-4-one-1-carboxylic acid. See *iso*Phoronecarboxylic acid.

1:2:3-Trimethylindole, action of chloroform on (PLANCHER and CARRASCO), A., i, 666.

2:3:3-Trimethylindolenine, Plancher's, constitution of (KONSCHEGG), A., i, 925.

Trimethylitamalic acid, barium salt (NOYES), A., i, 322.

3:3:5-Trimethyl-2-methyleneindoline and its additive salts (KONSCHEGG), A., i, 924.

3:3:7-Trimethyl-2-methyleneindoline and its salts (PLANGGER), A., i, 718.

3:4:6-Trimethyl-1:2:5-oxadiazine, 4-hydroxy-, and its additive salts (DIELS and VAN DER LEEDEN), A., i, 946.

Trimethylparaconic acid and its ethyl ester, bromide, chloride, amide, and anhydride (NOYES), A., i, 322.

Trimethylparaconylmalonic acid, ethyl ester (NOYES), A., i, 322.

1:1:2-Trimethyl*cyclo*pentane. See Dihydro*iso*laurolene.

4:6:6-Trimethyl-2-propyltetrahydro-1:3-oxazine and its platinichloride and nitroso-derivative (KOHN), A., i, 929.

3:4:5-Trimethylpyridine,2:6-*di*hydroxy-, and its hydrochloride and dibenzoyl derivative (ROGERSON and THORPE), T., 1703; P., 239.

2:3:5-Trimethylpyrrole, synthesis of, and its **4-carboxylic acid**, esters (KORSCHUN), A., i, 373.

5:6:8-Trimethylquinophthalone (EIB(NER), A., i, 716.

2:3-Trioxythio-1-phenyl-2:5-dimethylpyrazole (*3-thiopyrinetrioxide*) (MICHAELIS and HAHN), A., i, 379.

Triphenylacetic acid. See Tritanic acid.

Triphenylaminoguanidine, preparation of, and action of formic acid on (BUSCH), A., i, 307.

phenylarsine (PFEIFFER, HELLER, and PIETSCH), A., i, 164.

s-**Triphenylbenzene** (REICH), A., i, 35; (v. NIEMENTOWSKI), A., i, 612.

Triphenylbismuthine (PFEIFFER, HELLER, and PIETSCH), A., i, 164.

Triphenylcarbinol, colourless salts of (LAMBRECHT and WEIL), A., i, 128.

*p-tri*chloro- and *p-tri*iodo- and their chlorides, and ethyl ethers (v. BAEYER), A., i, 282, 358.

3-nitro-4-amino-, *N*-benzoyl derivative of (THOMAE), A., i, 587.

Triphenylcarbinols, ketonic decomposition of (FISCHER and HESS), A., i, 205; (v. GEORGIEVICS), A., i, 357.

Triphenylcarbinol bases, production of colour from (LAMBRECHT and WEIL), A., i, 243.

3:4:6-Triphenyl-1:2-diazine and its dihydro-derivative (JAPP and WOOD), T., 709; P., 154.

1:1:2-Triphenyl-1:2-dihydro*iso*benzofuran, 2-hydroxy-, and its condensation with phenols and aromatic amines (GUYOT and CATEL), A., i, 226.

2:5:5-Triphenyl-4:5-dihydro-1:3:4-oxadiazole, 4-benzoyl derivative of (STOLLÉ and MÜNCH), A., i, 95.

Triphenylethane, *p*-amino-, and its hydrochloride (BUSCH and RINCK), A., i, 519.

αεζ-Triphenyl-Δ$^{\alpha\gamma}$-hexadiene-ε-ol (BAUER), A., i, 278.

Triphenylmethane (v. BAEYER), A., i, 281; (v. BAEYER and HALLENSLEBEN), A., i, 358.

derivatives, heats of combustion of (SCHMIDLIN), A., ii, 11.

Triphenylmethane, *p*-amino-, and its benzoyl derivative and their 3-nitro-derivatives, and 3:4-*di*amino-, and its additive salts and diacyl derivatives (THOMAE), A., i, 586.

tri-p-bromo-, -chloro-, -iodo-, and -nitro- (FISCHER and HESS), A., i, 205.

Triphenylmethane dyes, influence of the position of methyl and nitro-groups relatively to the methane carbon atom on the colours of (REITZENSTEIN and RUNGE), A., i, 300.

action of sulphurous acid on (DÜRRSCHNABEL and WEIL), A., i, 947.

Triphenylmethyl and its additive compounds (GOMBERG and CONE), A., i, 426, 641.

Gomberg's, constitution of (TSCHITSCHIBABIN), A., i, 125, 270; (JACOBSON), A., i, 186.

heat of combustion of (SCHMIDLIN), A., ii, 11.

4-Triphenylmethyl-1-diphenylmethylene-Δ^{2,5}-*cyclo*hexadiene (JACOBSON), A., i, 186.

Triphenylphosphine (PFEIFFER, HELLER, and PIETSCH), A., i, 164.

Triphenylpiperidonedicarboxylic acid, ethyl ester (MAYER), A., i, 429.

αββ-Triphenylpropionic acid and its esters, and the action of bromine and of acetyl chloride on (KOHLER and HERITAGE), A., i, 208.

Triphenylpyrrole, 3-amino-, and its benzoyl and carbamide derivatives (ANGELICO), A., i, 660, 938.

Triphenylstibine (PFEIFFER, HELLER, and PIETSCH), A., i, 164.

Triplite from a new Swedish locality (NORDENSKIÖLD), A., ii, 174.

s-**Tri*iso*propylbenzene**, aluminium chloride compound, combination of, with hydrogen chloride and with benzene (GUSTAVSON), A., i, 334, 696.

s-**Tri*iso*propylbenzenesulphonic acid**, magnesium salt (GUSTAVSON), A., i, 334, 696.

Tristilbeneacetone anhydride (v. LIPPMANN and FRITSCH), A., i, 443.

Tritanic acid (*triphenylacetic acid*), 3:5-*di*hydroxy-, and its salts (v. LIEBIG), A., i, 781.

Tritanol, 3:5-*di*hydroxy-, phenol ether and **Tritane ether**, 3:5-*di*hydroxy- (v. LIEBIG), A., i, 783.

Tritanolactone, 2:4- and 3:5-*di*hydroxy-, and the ether of the 3:5-compound and its salts (v. LIEBIG), A., i, 781.

Trithioaldehydes, isomeric, transformations of (SUYVER), A., i, 741.

Trithiocarbodiglycollic acid and its ethyl ester and salts (HOLMBERG), A., i, 324.

Trithiocarbodilactic acid (HOLMBERG), A., i, 325.

Trithionates. See under Sulphur.

Tri-*p*-tolylcarbinol and its ethyl ether (TOUSLEY and GOMBERG), A., i, 44.

Tri-*p*-tolylmethane and its ω-amino- and ω-haloid derivatives (TOUSLEY and GOMBERG), A., i, 43.
Tri-*p*-tolylmethyl-aniline and **-*p*-toluidine** (TOUSLEY and GOMBERG), A., i, 44.
Tri-*p*-tolylstibine (PFEIFFER, HELLER, and PIETSCH), A., i, 164.
Trona from the region of Lake Chad (COURTET), A., ii, 173.
Tropane, 3-chloro- (WILLSTÄTTER and VERAGUTH), A., i, 544.
Trypanosomiasis, treatment of, by arsenious acid and "trypanroth" (LAVERAN), A., ii, 278, 408.
Trypsin, the individuality of (POLLAK), A., ii, 47.
relation of, to enterokinase (BAYLISS and STARLING), A., ii, 273.
action of (HEDIN), A., ii, 541.
Volhard's titrimetric method for the estimation of (LÖHLEIN), A., ii, 780.
Tryptic action, the kinetics of (BAYLISS), A., ii, 267.
proteolysis, liberation of tyrosine during (BROWN and MILLAR), P., 286.
Tubercular caseous deposits, composition of (SCHMOLL), A., ii, 272.
Tuberculin, action of calcium permanganate on (BAUDRAN), A., ii, 407.
Tuberculosis pulmonum, composition of the blood in (ERBEN), A., ii, 741.
Tubes, fused silica (BERTHELOT), A., ii, 308, 316, 386, 810.
osmosis through (BELLOC), A., ii, 443.
Tumours, nucleo-histon as a constituent of (BEEBE), A., ii, 408.
in mice, potassium and calcium in (CLOWES and FRISBIE), A., ii, 743.
See also Cancer and Malignant tumours.
Tungsten, spectrum of (HASSELBERG), A., ii, 129.
action of, on hydrated metatitanic acid (TAMMANN), A., ii, 256.
Tungsten *hexa*fluoride (RUFF and EISNER), A., ii, 255.
*tri*oxide, properties of, as a ceramic colouring matter (GRANGER), A., ii, 325.
and silicon dioxide, separation of (FRIEDHEIM, HENDERSON, and PINAGEL), A., ii, 614.
Tungstic acid and columbic acid, separation of (BEDFORD), A., ii, 832.
Tungsten aluminium silicide (MANCHOT and KIESER), A., ii, 165.
Tungsten, estimation of (v. KNORRE), A., ii, 286.
Tungstic acid. See under Tungsten.
Turmeric, composition of (LEACH), A., ii, 127.
Turnbull's blue, soluble, identity of, with soluble Prussian blue (HOFMANN, HEINE, and HÖCHTLEN), A., i, 38.
Turpentine oil, variations in the rotatory power of (RABY), A., ii, 423.
Tychite from Borax Lake, its artificial production and relation to northupite (PENFIELD and JAMIESON), A., ii, 723.
Typhoid fever, excretion of water in (SOLLMANN and HOFMANN), A., ii, 272.
Typhus abdominalis, composition of the blood in (ERBEN), A., ii, 741.
Typhus fever, leucocytosis of (LOVE), A., ii, 338.
Tyrosinase in the skins of some pigmented vertebrates (DURHAM), A., ii, 101.
Tyrosine from various sources, specific rotatory powers of (SCHULZE and WINTERSTEIN), A., i, 699.
liberation of, during tryptic proteolysis (BROWN and MILLAR), P., 286.
excretion of, in a case of cystinuria (ABDERHALDEN and SCHITTENHELM), A., ii, 741.
as the cause of the dyeing of silk and wool (PAULY and BINZ), A., i, 75.
as a source of nitrogen for plants (LUTZ), A., ii, 276.
Tyrosine, *di*iodo-. See Iodogorgonic acid.
Tyrothrixin from sterilised milk and Emmenthaler cheese (ADAMETZ and CHSZASZEZ), A., ii, 273.

U.

Ultramarine (HOFMANN and METZENER), A., ii, 589.
Undecyl alcohol and its phenylurethane (BOUVEAULT and BLANC), A., i, 12.
Unsaturated compounds (HINRICHSEN), A., i, 132.
reaction of, with organic magnesium compounds (KOHLER and HERITAGE), A., i, 207, 208; (KOHLER and JOHNSTIN), A., i, 215; (KOHLER and REIMER), A., i, 347; (KOHLER), A., i, 358, 700.
picrates and other additive products of (BRUNI and TORNANI), A., i, 269.
Uracil from the products of pancreatic autolysis (KUTSCHER and LOHMANN), A., ii, 466; (LEVENE), A., ii, 732.

Uracil, 5-amino- and 5-nitro- (WHEELER and BRISTOL), A., i, 482.
2-thio- (WHEELER and BRISTOL), A., i, 485.
Uranium and radium, relative proportion of, in radioactive minerals (RUTHERFORD and BOLTWOOD), A., ii, 568.
radioactive properties of (GODLEWSKI), A., ii, 498.
radioactivation by means of (BECQUEREL), A., ii, 567.
production of radium from (BOLTWOOD), A., ii, 663.
Uranium oxides, solid solutions of indifferent gases in (KOHLSCHÜTTER and VOGDT), A., ii, 394, 826; (FRIEDHEIM), A., ii, 530.
oxyfluorides (GIOLITTI and AGAMENNONE), A., ii, 255.
Uranous sulphate, properties of, and equilibrium phenomena with the hydrates of (GIOLITTI and BUCCI), A., ii, 827.
Uranyl *per*borate (BRUHAT and DUBOIS), A., ii, 246.
ammonium double carbonate (GIOLITTI and VECCHIARELLI), A., ii, 826.
chloride (OECHSNER DE CONINCK), A., ii, 38.
selenide (MILBAUER), A., ii, 94.
cæsium sulphate (OECHSNER DE CONINCK), A., ii, 395.
lithium and magnesium sulphates (OECHSNER DE CONINCK and CHAUVENET), A., ii, 530.
potassium sulphates, double (OECHSNER DE CONINCK and CHAUVENET), A., ii, 394.
sodium sulphate, synthesis of, by Spring's process (OECHSNER DE CONINCK), A., ii, 254.
Urate cells, physiological significance of the, in melliferous insects (SEMICHON), A., ii, 600.
Urazole derivatives (WHEELER and STATIROPOULOS), A., i, 720.
Urea in human urine (CAMERER), A., ii, 186.
elimination of, in healthy subjects (LABBÉ and MORCHOISNE), A., ii, 102.
treatment of urine before estimating (MOREIGNE), A., ii, 212.
estimation of, in urine (WENTZKI), A., ii, 214.
See also Carbamide.
Urea diuresis, mechanism of (HENDERSON and LOEWI), A., ii, 739.
Ureides, absorption spectra of, in relation to colour and chemical structure (HARTLEY), T., 1796; P., 166.
Ureidodi-ethyl- and **-propyl-malonic acids** (FISCHER and DILTHEY), A., i, 37; (CONRAD and ZART), A., i, 754.
Ureter, effects of ligature of one (AMOS), A., ii, 337.
Urethane. See Carbamic acid, ethyl ester.
Urethane derivatives, monosubstituted, mode of formation of (BODROUX), A., i, 427.
Uric acid, attempted synthesis of (FENTON), A., i, 267.
formation and decomposition of, in extracts of the organs of oxen (SCHITTENHELM), A., ii, 644.
oxidation and synthetic formation of, in extracts of ox liver (BURIÁN), A., ii, 271.
absorption spectra of, in relation to colour and chemical structure (HARTLEY), T., 1796; P., 166.
biochemical mechanism of the fermentation of (ULPIANI and CINGOLANI), A., ii, 190.
colour reaction of, with phosphotungstic acid (MOREIGNE), A., ii, 212.
origin of, in man (BURIÁN), A., ii, 335.
influence of fruit on the precipitation of, of urine (JEROME), A., ii, 543.
estimation of, in human urine (KRÜGER and SCHMID), A., ii, 776.
Uricolase (*uricolytic ferment*) (SCHITTENHELM), A., ii, 644, 645.
Urinary alkaloids. See Alkaloids.
indoxyl. See Indoxyl.
Urine, normal, composition of (FOLIN), A., ii, 183, 268.
acidity of (DRESER), A., ii, 186.
amylolytic action of (CLARK), A., ii, 540.
oxidising action of (BERTRAM), A., ii, 468; (SCHÜRHOFF), A., ii, 740.
in phosphorus poisoning (WOHLGEMUTH), A., ii, 338, 470.
in skin diseases (DESGREZ and AYRIGNAC), A., ii, 104.
elimination of urea in healthy subjects (LABBÉ and MORCHOISNE), A., ii, 102.
excretion of β-naphthol in, after the administration of small doses of naphthalene, benzonaphthol, and β-naphthol (EDLEFSEN), A., ii, 470.
excretion of sugar in, after administration of alanine in dogs without a pancreas (ALMAGIA and EMBDEN), A., ii, 842.
alcohol and acetone in (MAIGNON), A., ii, 406.

Urine, isolation of diamines from (LOEWY and NEUBERG), A., i, 158.
globulin of albuminous (SIKES), A., ii, 843.
iron in diabetic (ZUCCHI), A., ii, 469.
distribution of nitrogen in (SATTA), A., ii, 407.
a new nitrogenous constituent of human normal (HÁRI), A., ii, 842.
organic phosphorus in (SYMMERS), A., ii, 102.
pigment in, originating from scatole (PORCHER and HERVIEUX), A., ii, 187, 740; (MAILLARD), A., ii, 271.
the chromogen of so-called scatole-red in normal (STAAL), A., ii, 843.
Bence-Jones proteid in (LINDEMANN), A., ii, 186.
a non-dialysable proteid-like constituent of human (ABDERHALDEN and PREGL), A., ii, 843.
urea in human (CAMERER), A., ii, 186.
of the coyote (SWAIN), A., ii, 186.
of dogs, sulphur organic compound in (NEUBERG and GROSSER), A., ii, 739.
in fishes, osmotic pressure of (DEKHUYZEN), A., ii, 836.
preservation and action of the nitrogen of, as manure (BÖHME), A., ii, 477.
Urine, analytical processes relating to:—
detection of glyoxylic acid in (EPPINGER), A., ii, 543.
precipitation of lævulose from, by lead acetate (R. and O. ADLER), A., ii, 337, 843.
detection and estimation of traces of mercury in, with the aid of the Nernst balance (JÄNECKE), A., ii, 66.
tests for sugar in (PFLÜGER, SCHÖNDORFF, and WENZEL), A., ii, 45.
use of the orcinol reaction for the detection of sugar in (MANN), A., ii, 487.
electrometric estimation of the acidity of (v. ROHRER), A., ii, 772.
estimation of amino-acids in (ERBEN), A., ii, 124.
estimation of carbamates in (MACLEOD and HASKINS), A., ii, 123.
estimation of chlorine in (DEHN), A., ii, 350.
estimation of dextrose in (VISSER), A., ii, 359.
estimation of glycuronic acid in (TOLLENS), A., ii, 559.
estimation of β-hydroxybutyric acid in (RYFFEL), A., ii, 559.
estimation of indican in, by Meisling's colorimeter (ORRUM), A., ii, 872.
Urine, analytical processes relating to:—
estimation of phenolglycuronic acid in (NEUBERG and NEIMANN), A., ii, 426.
estimation of phosphoric acid and sulphur in (DUBOIS), A., ii, 609.
estimation of sugar in (BILINSKI), A., ii, 289.
treatment of, before estimating urea (MOREIGNE), A., ii, 212.
estimation of urea in (WENTZKI), A., ii, 214.
estimation of uric acid and of purine bases in human (KRÜGER and SCHMID), A., ii, 776.
estimation of veronal in (FISCHER and v. MERING), A., ii, 776.
See also Cystinuria, Diabetes, Diuresis, Excretion, Glycosuria, and Oxaluria.
Urotropine, physiological action of (NICOLAIER), A., ii, 188.

V.

Vacua, high, Dewar's method of producing (BLYTHSWOOD and ALLEN), A., ii, 694.
measurement of, in chemical distillation (REIFF), A., ii, 808.
Valency, conception of (ABEGG and HINRICHSEN), A., ii, 155; (BILLITZER), A., ii, 448.
theory of (ABEGG), A., ii, 155.
Valency stages of thallium and the oxidation power of oxygen, mutual relationships of the (SPENCER and ABEGG), A., ii, 369.
*iso***Valeraldehyde**, condensation of, with acetaldehyde (EHRENFREUND), A., i, 861.
condensation of, with formaldehyde (LICHTENSTERN), A., i, 509.
aldol from (RAINER), A., i, 16.
Valeramide, cyano- (CONRAD and ZART), A., i, 754.
Valeric acid, *di*amino-, formation of, from β-vinylacrylic acid, and its anhydride (FISCHER and RASKE), A., i, 863.
α-amino-δ-hydroxy-, synthesis of (SÖRENSEN), A., i, 749.
See also α-Ethylpropionic acid and α-Methylbutyric acid.
*iso***Valeric acid**, propyl ester, latent heat of evaporation of (BROWN), T., 269; P., 75.
γ-Valerolactone, δ-chloro-α-bromo-, and its **α-carboxylic acid**, ethyl ester, and their reactions with ammonia (LEUCHS), A., i, 545.

Valerolactone-α-carboxylamide, α-bromo-δ-hydroxy- (TRAUBE), A., i, 13.
Vanadic acid. See under Vanadium.
Vanadiselenious acid and its salts (PRANDTL and LUSTIG), A., ii, 395.
Vanadium, presence of, in coal from Liège (JORISSEN), A., ii, 535.
preparation of metallic (KOPPEL and KAUFMANN), A., ii, 593.
Vanadium compounds, behaviour of, towards gold and gold solutions (HUNDESHAGEN), A., ii, 639.
quadrivalent (KOPPEL, GOLDMANN, and KAUFMANN), A., ii, 593.
quinquevalent, with quadrivalent elements (PRANDTL and LUSTIG), A., ii, 395.
Vanadium *tri*chloride, hydrated, red derivatives of (STÄHLER), A., ii, 41.
*pent*oxide, combined oxidimetric method for the estimation of, in presence of molybdenum trioxide (GLASMANN), A., ii, 208.
Vanadic acid, test for, in minerals (HUNDESHAGEN), A., ii, 640.
Vanadium oxy- and thio-trichlorides (KOPPEL and KAUFMANN), A., ii, 593.
oxydichloride. See Vanadyl chloride.
Vanadium, estimation of (BÉARD), A., ii, 288.
separation of, from arsenic and molybdenum (FRIEDHEIM, DECKER, and DIEM), A., ii, 764.
Vanadyl ammonium carbonate (KOPPEL, GOLDMANN, and KAUFMANN), A., ii, 594.
chloride, compounds of, with pyridine and quinoline (KOPPEL, GOLDMANN, and KAUFMANN), A., ii, 594.
Vanilla extract, analysis of (WINTON and BAILEY), A., ii, 620.
Vanillidenetetrazoline (RUHEMANN and MERRIMAN), T., 1777.
Vanillin, occurrence of (v. LIPPMANN), A., i, 66.
fate of, in the organism (KOTAKE), A., ii, 645.
Vanillylidene-acetoacetic acid, ethyl ester, **-bisacetoacetic acid** and its ethyl ester and oxime, and **-malonic acid** and its ethyl ester (KNOEVENAGEL and ALBERT), A., i, 63.
Vanillylidene-acetylacetone and **-bisacetylacetone** (KNOEVENAGEL and ALBERT), A., i, 63.
Vanillylidenenitromethane (KNOEVENAGEL and WALTER), A., i, 66.
Vaporisation of solid substances at the ordinary temperature (ZENGELIS), A., ii, 143.
heat of. See under Thermochemistry.
Vapour density, apparatus for the determination of (EMICH), A., ii, 441, 803; (GRIMSEHL), A., ii, 442.
modification of Victor Meyer's apparatus for the determination of (HARRINGTON), A., ii, 676.
determination of, at high temperatures (EMICH), A., ii, 441.
See also Density.
Vapour pressure by air-bubbling (PERMAN), A., ii, 146.
Biot's formula for, and some relations at the critical temperature (MILLS), A., ii, 152, 443.
of solid solutions (SPERANSKY), A., ii, 230.
Vapour tension. See Vapour pressure.
Vase, Egyptian, of the 18th dynasty, viscous fatty matter from (BERTHELOT), A., i, 169.
Vaselin, composition of commercial (MABERY), A., i, 313.
Vaselin and **Vaselin oil** (ADAMS), A., i, 253.
Vaso-dilators, action of (HENDERSON and LOEWI), A., ii, 730.
Vegetable organs, lime requirements of various (LOEW), A., ii, 751.
organs and tissues, changes in the dimensions and volume of, under the influence of dessication (BERTHELOT), A., ii, 111, 413.
powders, extraction apparatus for large quantities of (LOHMANN), A., ii, 309.
products, estimation of ammonia in (SELLIER), A., ii, 60.
estimation of sulphates in (FRAPS), A., ii, 59.
tissues, the silver reaction in (MACALLUM), A., ii, 736.
Vegetables, assimilation of certain ternary substances by (MAZÉ and PERRIER), A., ii, 112.
Vegetarianism (CASPARI), A., ii, 840.
Vegetation in atmospheres rich in carbon dioxide (DEMOUSSY), A., ii, 111.
Velocity of hydrolysis. See under Affinity.
Velocity of solution of solid substances (BRUNER and TOLLOCZKO), A., ii, 806.
Venoms. See Poison, snake.
Veratraldehyde, bromo-, and its phenylhydrazone (PICCININI), A., i, 599.
Veratrine, detection of (REICHARD), A., ii, 871.
Veratrole, *tri*nitro-, reactions of (BLANKSMA), A., i, 277.
Veratroylbikhaconine and its salts (DUNSTAN and ANDREWS), T., 1643; P., 234.
Veronal. See 5:5-Diethylbarbituric acid.

Vertebrates, pigmented, tyrosinase in the skins of some (DURHAM), A., ii, 101.
Vicia sativa, amino-acids from the seedlings of (SCHULZE and WINTERSTEIN), A., i, 686.
Vinegar, wine. See Wine vinegar.
Vinegars, presence of acetylmethylcarbinol in certain (PASTUREAU), A., i, 559.
Vines, chlorophyllous assimilation in young shoots of (GRIFFON), A., ii, 475.
Vinylacetic acid and its anilide and its dibromide (AUTENRIETH and PRETZELL), A., i, 629.
β-Vinylacrylic acid, transformation of, into diaminovaleric acid (FISCHER and RASKE), A., i, 863.
Vioform and **Vioform gauze**, analysis of, quantitatively (FRESENIUS and GRÜNHUT), A., ii, 211.
Viscosity and electrical conductivity, relation between (JONES and CARROLL), A., ii, 73; (PISSARJEWSKY and LEMCKE), A., ii, 684.
of gases, apparatus for measuring the absolute coefficient of (CHELLA), A., ii, 629.
of liquid mixtures (DUNSTAN), T., 11.
at their boiling points (FINDLAY), A., ii, 803.
Viscosity apparatus (BOUSFIELD), A., ii, 369.
Volatile substances, apparatus for estimating, by loss of weight (KREIDER), A., ii, 280.
Voltameter. See under Electrochemistry.
Volume, specific, as the determining criterion of chemical combination in metal alloys (MAEY), A., ii, 146.

W.

Waal's equation, van der. See Equation.
Water, synthesis of, by the action of radium rays (DAVIS and EDWARDS), A., ii, 448.
purification of, by continuous fractional distillation (BOUSFIELD), T., 740.
increase of the conductivity of, by radium emanations (GRASSI), A., ii, 793.
molecular conductivity of (BLACKMAN), P., 237.
decomposition of, by radium (RAMSAY), A., ii, 665.
molecular depression of the freezing point of, produced by some very concentrated saline solutions (DE COPPET), A., ii, 10.
Water, action of nitrogen on the vapour of, at high temperatures (TOWER), A., ii, 814.
Water of crystallisation, influence of temperature on the amount of, as evidence supporting the theory of the existence of hydrates in solution (JONES and BASSETT), A., ii, 509.
NATURAL WATERS:—
cause of the green tint of (SPRING), A., ii, 695.
in and about Halle, radioactive properties of (SCHENK), A., ii, 432.
Ferruginous water, inadmissibility of soaps for estimating the hardness of (GAWALOWSKI), A., ii, 68.
Mineral waters, radioactivity of some (SCHLUNDT and MOORE), A., ii, 368.
chemical composition of the radioactive gaseous mixtures evolved from the waters of thermal (MOUREU), A., ii, 5.
hydrogen sulphide microbes in (GOSLINGS), A., ii, 108.
of the Alpine regions, radioactivity of (BLANC), A., ii, 221.
Bohemian, radioactivity of (MACHE and MEYER), A., ii, 498.
of Echaillon and Salins Moutiers, radioactive constituents of the deposits of (BLANC), A., ii, 786.
of Fumade (ASTRUC and DELORME), A., ii, 727.
Gastein thermal, radioactivity of (MACHE), A., ii, 367.
of the Southern Viennese thermal zone, radioactivity of some (MACHE and MEYER), A., ii, 787.
thermal, from Wiesbaden, radioactivity of (HENRICH), A., ii, 6, 221; (SCHMIDT), A., ii, 221; (HENRICH and BUGGE), A., ii, 568.
Potable water, purification of (MOORE), A., ii, 107; (KRAEMER), A., ii, 108; (BASCH), A., ii, 515.
purification and sterilisation of, by means of calcium peroxide (FREYSSINGE and ROCHE), A., ii, 515.
sterilisation of, by hydrogen peroxide (BONJEAN), A., ii, 190.
action of magnesium and magnesia on the microbes in (DIENERT), A., ii, 190.
isolation of *Bacillus typhosus* from (WILLSON), A., ii, 748.
bacterial deposition of iron in (BEYTHIEN), A., ii, 473.
Sea water, tension of carbon dioxide in (KROGH), A., ii, 26.
gold in (DE WILDE), A., ii, 532.

NATURAL WATERS:—
Sea water, presence and distribution of nitrogen-fixing bacteria in (KEUTNER), A., ii, 189.
toxicity of, on fresh-water animals (OSTWALD), A., ii, 272.
Rain water, radioactivity of (JAUFMANN), A., ii, 662.
Spring water, radioactivity of (JAUFMANN), A., ii, 663.
of the Taunus, radioactivity of (SCHMIDT), A., ii, 220.
Surface waters, radioactivity of (JAUFMANN), A., ii, 662.
Well waters, deep, radioactivity of some (SCHLUNDT and MOORE), A., ii, 368.
detection of traces of manganese, in presence of iron, in (CRONER), A., ii, 611.
Water analysis:—
detection of ammonia in (TRILLAT and TURCHET), A., ii, 282
estimation of ammonia in (CAVALIER and ARTUS), A., ii, 609.
estimation of ammonia and proteid-nitrogen in (EFFRONT), A., ii, 68.
estimation of *Bacillus coli communis* in (GAUTIÉ), A., ii, 660.
estimation of chlorides in (ANDREWS), A., ii, 115.
estimation of nitric acid in (UTZ), A., ii, 283; (BUSCH), A., ii, 418.
estimation of nitrogen as nitrate in (WESTON), A., ii, 352.
estimation of organic nitrogen in (BROWN), T., 1051; P., 208.
estimation of combined sulphuric acid in (BLACHER and KOERBER), A., ii, 552.
estimation of, in food and physiological preparations (BENEDICT and MANNING), A., ii, 349.
Water-bath, electric (BEEBE and BUXTON), A., ii, 514.
Wax, bees', influence of the duration of boiling on the saponification value of (SCHWARZ), A., ii, 361, 657.
assay of (BUCHNER), A., ii, 126.
Waxes, apparatus for determining the specific gravity of (RAKUSIN), A., ii, 303.
Weights, the unit of combining (LUTHER), A., ii, 448.
Weights, molecular, new method of determining (BLACKMAN), T., 1474; P., 228, 304.
determination of, by means of platinum thermometers (BARNES, ARCHIBALD, and MCINTOSH), A., ii, 238.
determination of, modifications of the thermometer used in (BECKMANN), A., ii, 300.
Weights, molecular, determination of, in boiling concentrated sulphuric acid (BECKMANN), A., ii, 676.
determination of, by the rise of the boiling point in cathode ray vacuum (KRAFFT and LEHMANN), A., ii, 143.
determination of, by the use of solvents with high boiling points (RÜGHEIMER, MITTLER, and RUDOLFI), A., ii, 571.
determination of, by the application of the microscopic method, to solvents of high boiling point (BARGER and EWINS), T., 1756; P., 250.
determination of, by the vapour current method at high temperatures (BECKMANN), A., ii, 676.
determination of, by lowering of vapour pressure (PERMAN), T., 194; P., 23.
of metallic chlorides (RÜGHEIMER and RUDOLFI), A., ii, 576.
calculation of the exact, of the easily liquefiable gases from their densities (GUYE), A., ii, 442.
of salts in indifferent solvents (HANTZSCH), A., ii, 305.
determination of, in solid solutions (KÜSTER and WÜRFEL), A., ii, 80; (KÜSTER and DAHMER), A., ii, 230.
Well waters. See under Water.
Wheat, development of (SCHULZE), A., ii, 754.
manuring experiments on (VOELCKER), A., ii, 754.
variability of varieties of, in resistance to toxic salts (HARTER), A., ii, 754.
proteids of (OSBORNE and HARRIS), A., ii, 194.
Wheats, Durum (NORTON), A., ii, 754.
Wheat flour, action of various physical and chemical agents on the gluten of (FLEURENT), A., ii, 215.
baking properties of, in relation to the proteids of wheat gluten (KÖNIG and RINTELEN), A., ii, 113.
Wheat grain and **straw**, effect of rust on (SHUTT), A., ii, 476.
White lead. See Lead hydroxycarbonate.
White metal, assay of (DINAN) A., ii, 357.
Williamson's violet, composition of (HOFMANN, HEINE, and HÖCHTLEN), A., i, 39; (HOFMANN and RESENSCHECK), A., i, 757.
Wine, lecithin in (FUNARO and BARBONI), A., ii, 275.
amount of sodium oxide occurring naturally in (KRUG), A., ii, 864.
detection of citric acid in (ROBIN), A., ii, 124.

(o-*Xylene*, *Me* : *Me* = 1:2 ; m-*xylene*, *Me* : *Me* = 1:3 ; p-*xylene*, *Me* : *Me* = 1:4.)

Wine, detection of saccharin in (CHACE), A., ii, 292.
detection of traces of zinc in (BRAND), A., ii, 653.
estimation of the volatile acids in (WINDISCH and ROETTGEN), A., ii, 212, 361.
estimation of glycerol in (LABORDE), A., ii, 768 ; (ROCQUES), A., ii, 769.
estimation of lecithin in (MURARO), A., ii, 564.

Wine diseases, diastases in (MALVEZIN), A., ii, 749.

Wine brandies. See Brandies.

Wine vinegar, analysis of (FROEHNER), A., ii, 360.

Wood fibre, detection of (HERZBERG), A., ii, 657.

Wool as a dye producer (PAULY and BINZ), A., i, 75.
process of dyeing (SUIDA), A., i, 457 ; (GELMO and SUIDA), A., i, 714.

Wool fat, constituents of (RÖHMANN), A., ii, 842.

Wool-fibre, histological changes in, by the prolonged action of water (TARUGI), A., ii, 182.

Wort, beer, table for the rapid calculation of the original extractive matter of (LEHMANN and STADLINGER), A., ii, 123.

Worts, detection of traces of zinc in (BRAND), A., ii, 653.

X.

Xantheacetic acid and its amide and nitrile, esters of (TRÖGER and VOLKMER), A., i, 15.
esters and salts (HOLMBERG), A., i, 323 ; (BIILMANN), A., i, 626.

Xanthoacetoacetic acid, diethyl ester, and **Xanthoacetone**, ethyl ether (TRÖGER and VOLKMER), A., i, 15.

Xanthobutyric acid, esters (TRÖGER and VOLKMER), A., i, 16 ; (BIILMANN), A., i, 626.

Xanthochelidonic acid, ethyl ester, molecular refraction of (HOMFRAY), T., 1456 ; P., 226.

Xanthoformic acid, diethyl ester (HOLMBERG), A., i, 323.

Xanthogen compounds, preparation of (TSCHUGAEFF), A., i, 166.
reaction and its application to the terpene and camphor series (TSCHUGAEFF), A., i, 71.

Xanthone, 2-hydroxy-, and its methyl ether (ULLMANN and KIPPER), A., i, 596.

Xanthone, 4-hydroxy- (ULLMANN and ZLOKASOFF), A., i, 598.

Xanthones, formation of, from aryloxybenzoic acids (ULLMANN and KIPPER), A., i, 596 ; (ULLMANN and ZLOKASOFF), A., i, 597.

Xantho-α- and **-β-propionic acids** and their salts and esters (HOLMBERG), A., i, 324 ; (BIILMANN), A., i, 626.

Xanthosuccinic acid (BIILMANN), A., i, 626.

Xanthylium, definition of the term (DECKER), A., i, 667.

Xenon, new method of preparing (VALENTINER and SCHMIDT), A., ii, 704.

Xylene, action of carbon tetrachloride on, in presence of aluminium chloride (BOESEKEN), A., i, 424.

o-**Xylene**, ω-amino- and ω-nitro-, and their salts (KONOWALOFF), A., i, 762.
s-iodo-, *s*-iodoso-, *s*-iodoxy-, and *s*-iodonium compounds, and their salts (WILLGERODT and SCHMIERER), A., i, 425.

p-**Xylene**, 3:5-*di*nitro-2-nitroamino-, and its salts (ZINCKE and ELLENBERGER), A., i, 486.
2:3:5-*tri*nitro-, and its reactions (BLANKSMA), A., i, 426.

Xylenes, *o*-, *m*-, and *p*-, latent heats of evaporation of (BROWN), T., 267 ; P., 75.
nitration of (KONOWALOFF), A., i, 762 ; (GUREWITSCH), A., i, 763.

p-**Xyleneazobenzene** and its derivatives (WILLGERODT and LINDENBERG), A., i, 551.

Xyleneazo-. See also Xylylazo-.

m-**Xylene-4-sulphonacetic acid**, amide, nitrile, and thioamide of (TRÖGER and HILLE), A., i, 336.

1:3-Xylene-4-sulphonethenylaminoxime (TRÖGER and VOLKMER), A., i, 356.

m-**Xylene-4-sulphonyl-***p*-**aminobenzene-azo-β-naphthol** (MORGAN and MICKLETHWAIT), T., 1308.

m-**Xylene-4-sulphonyl-***p*-**nitroaniline** and **-*p*-phenylenediamine** and its diazotisation (MORGAN and MICKLETHWAIT), T., 1307 ; P., 222.

m-**5-Xylenol**, *s-tri*nitro- (KNECHT), A., i, 53.

vic-m-**Xylenol**, oxidation of (AUWERS and v. MARKOVITS), A., i, 219.

p-**Xylenol** methyl and ethyl ethers, action of nitric acid on (DECKER and SOLONINA), A., i, 198.

s-**Xylidine**, preparation of (WILLGERODT and SCHMIERER), A., i, 425.

(o-*Xylene*, *Me* : *Me* = 1:2 ; m-*xylene*, *Me* : *Me* = 1:3 ; p-*xylene*, *Me* : *Me* = 1:4.)

Xylidines, *o*:3-, *o*:4-, and *p*:3-, diazoamino-compounds from (VIGNON and SIMONET), A., i, 397.

p-**Xylidinesulphonic acid**, nitro-, and its reactions (BLANKSMA), A., i, 426.

Xylosediphenylhydrazone (TOLLENS and MAURENBRECHER), A., i, 262.

as-m-**Xylylazoformaldoxime** (BUSCH and WOLBRING), A., i, 494.

Xylylazo-. See also Xyleneazo-.

p-**Xylylbenzylidenehydrazine** (WILLGERODT and LINDENBERG), A., i, 550.

p-**Xylyl***tri***chloromethylcarbinol** and its acetate and benzoate (DINESMANN), A., i, 645.

p-**Xylylhydrazine** and its additive salts (PLANCHER and CARAVAGGI), A., i, 298 ; (WILLGERODT and LINDENBERG), A., i, 550.

1-Xylyl-2-methylpyrrolidone-2-carboxylic acids, *o*-, *m*-, and *p*-, and their esters, amides, aminoximes, and nitriles (KÜHLING and FALK), A., i, 372.

m-p-**Xylyloxybenzoic acid** (ULLMANN and ZLOKASOFF), A., i, 598.

3-*m*-**Xylylrhodanic acid** and its condensation with aldehydes (ANDREASCH and ZIPSER), A., i, 931.

Xylylsulphon-. See Xylenesulphon-.

m-**4-Xylylthiosulphonic acid**, *p*-phenylenediamine salt (TRÖGER and VOLKMER), A., i, 89.

m-**Xylyl-***p*-**toluidine**, *o*-amino-, condensation of, with aldehydes (v. WALTHER and BAMBERG), A., i, 298.

Y.

Yeast, autodigestion of some varieties of (SCHENCK), A., ii, 547.

formation of hydrogen sulphide by (WILL and SCHÖLLHORN), A., ii, 547 ; (SCHANDER), A., ii, 647.

beer, autofermentation of (EFFRONT), A., ii, 602.

dead, fermentation coefficient of, on various substrata (TELESNIN), A., ii, 342.

respiration and fermentation of the different varieties of (WARSCHAWSKY), A., ii, 342.

pressed, plasmolysis and turgor-regulation of (SWELLENGREBEL), A., ii, 473.

Mycoderma, new varieties of (TAKAHASHI), A., ii, 473.

resting, in moist and pressed conditions (HENNEBERG), A., ii, 274.

top. See *Saccharomyces cerevisiæ*.

Yeasts, influence of different sugar solutions on the temperatures at which various, are killed (TULLO), A., ii, 412.

non-inverting (VAN LAER), A., ii, 547. See also Fermentation.

Yeast catalase (ISSAEW), A., ii, 547.

Yeast cells, action of foreign organisms on the behaviour and duration of life of (HENNEBERG), A., ii, 274.

Yeast juice, the alcoholic ferment of (HARDEN and YOUNG), A., ii, 109 ; (HARDEN), A., ii, 275.

Yeast mashes, acidifying and fermenting (HENNEBERG), A., ii, 848.

Yohimbine (SPIEGEL), A., i, 816.

Yohimboaic acid, reactions of, and its anhydride (SPIEGEL), A., i, 816.

Yttrium earth related to gadolinium (URBAIN), A., ii, 35, 711 ; (DE BOISBAUDRAN), A., ii, 89.

Yttrium metals, action of organic acids on (BEHRENS), A., i, 167.

Z.

Zδ, the element (URBAIN), A., ii, 35, 711 ; (DE BOISBAUDRAN), A., ii, 89.

Zeophyllite from Radzein, Bohemia (CORNU), A., ii, 465.

Zinc, electromotive behaviour of, in its solution in alkali cyanides (SPITZER), A., ii, 501, 611.

apparatus for the determination of the hydrogen equivalent of (FRANKFORTER and FRARY), A., ii, 514.

rate of solution of (BRUNNER), A., ii, 235.

crystallisation of, by the electrolysis of its salts (SAPOSHNIKOFF), A., ii, 395.

Zinc alloys with aluminium (SHEPHERD), A., ii, 588.

See also Ziskon.

with antimony (MÖNKEMEYER), A., ii, 171.

with copper (SACKUR, MAUZ, and SIEMENS), A., ii, 524.

See also Muntz metal.

with copper and iron, action of the atmosphere on (HABERMANN), A., ii, 693.

Zinc carbonate, decomposition of, by solutions of alkali chlorides (CANTONI and PASSAMANIK), A., ii, 586.

chloride and its hydrates (MYLIUS and DIETZ), A., ii, 321.

syntheses by means of zinc chloride (NIEMCZYCKI), A., i, 579.

Zinc hydroxide, solubility of, in alkalis (MOIR), P., 310.
ammonium selenate and sulphate, crystallographic study of (TUTTON), T., 1123; P., 177.
potassium silicates (DUBOIN), A., ii, 634.
sulphide, phosphorescence of, through the influence of condensed gases obtained by heating rare earth minerals (BASKERVILLE and LOCKHART), A., ii, 624.
Zinc mercuric cyanide, constitution of (DOTT), A., i, 695.
Zinc, detection of traces of, in beer, wine, worts, &c. (BRAND), A., ii, 653.
estimation of, electrolytically (INGHAM), A., ii, 63; (JENE), A., ii, 653.
estimation of, in blendes and other natural and artificial products (PATTINSON and REDPATH), A., ii, 356.
Zinc blendes from Sardinia, gravimetric and spectroscopic analysis of (RIMATORI), A., ii, 598.
Zincum boricum or *oxyboricum* (HOLDERMANN), A., ii, 34.
Zirconia. See Zirconium oxide.
Zirconium salts (ROSENHEIM and FRANK), A., ii, 256.
haloids with ammonia (STÄHLER and DENK), A., ii, 597.
hydroxide (RUER), A., ii, 256.
nitride, formation of (WEDEKIND), A., ii, 596.
oxide (*zirconia*), reduction of (WEDEKIND), A., ii, 596.
Metazirconic acid (RUER), A., ii, 256; (VAN BEMMELEN), A., ii, 461.
Zirconium oxychloride as a test for zirconium (RUER), A., ii, 863.
sulphate, constitution of normal (RUER), A., ii, 41.
sulphates (HAUSER), A., ii, 531; (RUER), A., ii, 863.
Zirconium organic compounds (ROSENHEIM and FRANK), A., ii, 256.
Zirconium, estimation of, in presence of titanium, especially in rocks (DITTRICH and POHL), A., ii, 287.
Zirconiumsulphuric acids (RUER and LEVIN), A., ii, 827.
Zisium and **Ziskon** (BARNETT), A., ii, 636. See also Aluminium alloys.
Zymase and alcoholic fermentation (HARDEN and YOUNG), A., ii, 109; (HARDEN), A., ii, 275.
Zymin. See Yeast, dead.

ERRATA.

Collective Index, 1873–1882.

Page	Col.	Line	
284	ii	19*	**Smith**, *Edgar Francis* (and with his co-workers) *should be* **Smith**, *Edgar Fahs.*

Collective Index, 1883–1892.

Part I.

404		18*	**Smith**, *Edgar Francis* (and with his co-workers) *should be* **Smith**, *Edgar Fahs.*

Collective Index, 1893–1902.

Part I.

607	ii	18	**Smith**, *Edgar Francis* (and with his co-workers) *should be* **Smith**, *Edgar Fahs.*

Vol. LXXXVI (Abstr., 1904).

Part I.

Page	Line	
659	11*	*for* "$C_6H_9<$" *read* "$C_6H_4<$."
659	2*	

Part II.

419	5		*for* "Ytterbia"	*read* "Ytterby."
486	22, 23,	,,	"Sa"	,, "Sm."
536	1*	,,	"i, 600"	,, "ii, 125."
559	8*	,,	"*arsenamide*"	,, "*arsenimide.*"
620	9* *et seq.*	,,	"pyrochlor"	,, "pyrochlore."
839	19	,,	"400 kilos"	,, "4000 kilos."

Vol. LXXXVIII (Abstr., 1905).

Part I.

23	21* & 20*		*delete* "from Prussian blue."
51	13		for "*dinitro*-p-*benzoylaminophenyl benzoate*" read "*dinitro*-p-*nitrobenzoylaminophenyl nitrobenzoate.*
294	13* / 12*	,,	"and also" *read* "but dissolves."
399	14*	,,	"307" ,, "311."
467	15	,,	"alkyl" ,, "allyl."
603	7	,,	"1903" ,, "1899."
949	17* 16*		"endo*anilinodiphenyltriazole*" read "endo*anilodiphenyltriazole.*"
,,	12*	*for*	"endo*anilinotriphenyltriazole*" ,, "endo*anilotriphenyltriazole.*"
,,	8*	,,	"endo*anilinodi*-p-*tolyltriazole*" ,, "endo*anilodi*-p-*tolyltriazole.*"

* From bottom.

PART II.

Page	Line.				
108	5*	*for*	"**Rose**"	*read*	"**Roll.**"
120	22*	,,	"**Iron**"	,,	"**Tin.**"
173	8*	,,	"*Inst*"	,,	"*Ist.*"
231	8*	,,	"THOMSON"	,,	"THOMSEN."
601	26	,,	"blood"	,,	"fowl-."
634	8*	,,	"**Zinc**"	,,	"**Tin.**"
634	3*	,,	"zinc"	,,	"tin."
636	25	,,	"leakages"	,,	"linkings."

Page	Col.	Line			
932	i	15*	*for* "**Konsortium**"	*read*	"**Consortium.**"

* From bottom.